# AlphaTheta Corporation / Serato Audio Research Limited

## Serato submission in response to Commerce Commission Statement of Issues

1. Serato Audio Research Limited (**Serato**) makes this submission in response to the Commerce Commission's Statement of Issues regarding AlphaTheta Corporation's (**ATC**) application for clearance to acquire Serato (**the Application**).[1]

2. Serato acknowledges that the Commission's investigation is ongoing, and appreciates the opportunity to comment on the competition issues the Commission is continuing to consider.

3. Serato remains of the view that the Commission can be satisfied that the proposed acquisition will not substantially lessen competition. In summary, Serato submits that:

   3.1 The Statement of Issues significantly understates the constraint that providers of mobile DJ apps place on providers of DJ laptop/laptop applications. The facts are that mobile DJ apps are:

      (a) functionally equivalent to DJ laptop applications;

      (b) actively promoted by DJ hardware providers as being direct substitutes for DJ laptop applications;

      (c) used by professional DJs to deliver performances of a similar quality to those given using embedded software or DJ laptop applications.

   3.2 Given the above facts, any lingering doubts regarding the competitiveness of mobile DJ apps is unfounded and should be dismissed. Serato submits that such scepticism is largely due to the demographic profile of participants in the DJ census prepared by Digital DJ Tips (the **DJ Census**) and other market participants, who are predominately from an older segment of the DJ community. This group has traditionally favoured the use of DJ hardware in conjunction with laptop applications, which may explain their reluctance to fully embrace mobile DJ apps despite their functional equivalence.

   3.3 The constraint from mobile DJ apps is particularly significant due to their attractiveness to younger DJs with a preference for mobile devices.

   3.4 The merged entity will also be constrained by various existing providers of DJ software, particularly Virtual DJ, Traktor, Engine DJ, Algoriddim djay, Mixxx and DJUCED. Music production software with DJ capability (such as Ableton Live) will also provide constraint.

   3.5 Barriers to switching are overstated in the Statement of Issues. The facts around switching are covered in depth by NERA's report of 27 November 2023 where it discusses hardware compatibility, music library portability and the uniformity of user interfaces. Serato also experiences significant churn in its DJ software business, suggesting that users can and frequently do exercise choice around DJ software purchases.

   3.6 Serato and ATC's DJ software product, rekordbox, are not close competitors. Although ATC drives innovation in DJ hardware, [**redacted**]. Furthermore, Serato does not price in a similar manner to ATC. rekordbox has secured market share over time and it is expected that some of this would have been at Serato's expense, however, this outcome simply reflects ATC's ability to position rekordbox as an in-house software solution of equivalent standard to

[1] Confidential information in this submission is highlighted. Further information identifying the party to which highlighted information is confidential and the basis for the Parties' confidentiality claims is included in the **Schedule of confidential information**.

Serato (which is a strategy open to any hardware provider concerned about its position following the proposed acquisition).

3.7 The merged entity will also be constrained by the prospect of new entry, particularly from audio industry players in adjacent markets (such as music production and music streaming). Serato submits that the barriers to entry in these markets is low and in support of this proposition has commissioned a report by software engineering experts ClearPoint. ClearPoint concludes that from a practical perspective, entry could be achieved within a 12-18 month period. The report is attached as **Appendix E**.

3.8 The existence of several credible alternatives as well as low barriers to entry means that Serato is not a "must-have" and so there is no market power on which to base a foreclosure strategy.

3.9 In any event, the merged entity will have no ability to raise prices or reduce quality anyway due to the earnout mechanism and the associated Seller Protections in the sale and purchase agreement (**SPA**). The earnout mechanism in particular places comprehensive incentives on the sellers of the Serato business (**the Sellers**) and Serato's management to enforce the Seller Protections and ensure that Serato continues to be an attractive software provider for all DJ hardware suppliers to partner with, regardless of any strategies that ATC could theoretically seek to implement to work around the specific obligations in the SPA.

3.10 Any theoretical incentive to foreclose that exists in the abstract due to the relative margins as between DJ hardware and DJ software is more than offset by the practical need for ATC to compensate the Sellers for the necessary changes to the SPA that would adversely impact the Sellers' earnout (see NERA's calculations in the report submitted with ATC's submission to the Statement of Issues). Additionally, a range of legal and practical constraints significantly reduces the feasibility of foreclosure strategies being successful, rendering the implementation of such strategies commercially impractical.

3.11 The period covered by the SPA is such that, by the time the relevant clauses expire, the competitive landscape in this dynamic market can be expected to have significantly changed so that any momentary opportunity to foreclose (which for the avoidance of doubt Serato submits does not exist) is unlikely to endure.

3.12 Any theoretical foreclosure strategy or other anti-competitive strategy based on the merged entity using competitors' sensitive information would be in breach of recently negotiated protocols and in any event ineffective in practical terms, due to the ability of hardware providers to control the sharing of confidential information in manner that provides appropriate protection.

4. Serato agrees that it would be likely to remain independently owned in the counterfactual[2] and the proposed acquisition would not substantially lessen competition due to other coordinated effects.[3] Serato makes no further submissions on these points. To the extent that terms in the SPA are relevant to the scenario with the proposed acquisition, a comprehensive explanation of those provisions is set out in **Appendix B**. Serato also refers to them as needed throughout the submission.

**Structure of Submission**

5. This submission is structured as follows:

5.1 **Section A** explains how the Statement of Issues materially underestimates the substitutability of mobile DJ apps for DJ laptop applications and the constraint provided by music production

[2] Statement of Issues at [47].
[3] Statement of Issues at [11].

software, and explains why the constraint from mobile DJ apps alone would be sufficient to prevent any substantial lessening of competition;

5.2 **Section B** explains important contextual factors about how competition occurs in the DJ software and hardware markets;

5.3 **Section C** explains why, in its assessment of unilateral effects in the DJ software market, the Statement of Issues has overstated the importance of competition between Serato and ATC's rekordbox and understated the importance of other constraints in the market (including apps);

5.4 **Section D** explains why the proposed acquisition would not substantially lessen competition due to vertical effects in the DJ hardware market;

5.5 **Section E** explains why the proposed acquisition would not substantially lessen competition due to vertical effects in the DJ software market;

5.6 **Section F** explains why the proposed acquisition would not substantially lessen competition due to the merged entity's access to its hardware rivals' sensitive information;

5.7 **Appendix A** sets out a comparison of the pricing strategies deployed by Serato and rekordbox.

5.8 **Appendix B** explains ATC's obligations regarding the operation of the Serato business (referred to as the Seller Protections) and the earnout mechanism in the SPA;

5.9 **Appendix C** sets out information about other competitors in the DJ software market.

5.10 **Appendix D** contains screenshots containing comparisons of the interfaces of some DJ software products.[4]

5.11 **Appendix E** contains the report prepared by ClearPoint regarding the time and resource required to launch a new competing DJ software product.

## A. The Statement of Issues understates the constraint that apps already and will in future place on Serato

6. The Statement of Issues materially understates the substitutability of mobile DJ apps for DJ laptop applications and the constraint they provide. This oversight stems from:

6.1 a misconception that mobile apps are only suitable for "beginner" users, despite evidence that mobile apps can and do offer functionality that matches or surpasses that of laptop applications and are regularly used by professional DJs;

6.2 a failure to properly account for consumer preferences driven by the ubiquity of mobile phones with sufficient processing power to run DJ software; and

6.3 an underestimation of the significance of the innovation that mobile apps have driven for DJ software offerings more generally.

7. Serato submits that, as a result, the DJ software market should include mobile DJ apps. But even if only considered as an out-of-market constraint, the Statement of Issues incorrectly dismisses the central role played by mobile DJ apps.

[4] Serato is also providing the Commission with a comprehensive set of screenshots of the interfaces of DJ software products separately from this submission.

8. In this regard, Serato further submits that the Application may be a case of the type identified in the Commission's recent *Ex-post merger review report* where "emerging consumer trends create … the need for carefully considering market definitions in dynamic markets to determine how sensitive the competitive effects analysis may be to those definitions". In such cases, "although market definition is a useful analytical tool, it may be appropriate to place more weight on competitive constraints when assessing mergers in dynamic markets".[5]

9. As discussed later in this submission, properly taken into account, the constraint the merged entity would face from mobile apps alone should be sufficient to satisfy the Commission that the proposed acquisition will not substantially lessen competition due to unilateral effects or vertical effects. This is the case whether mobile DJ apps are considered part of the DJ software market (which Serato submits they should be) or not.

10. Serato further submits that the evidence the Statement of Issues cites on music production software understates the constraint it can and does provide, and that music production software should also be considered part of the DJ software market.

**Comments on legal framework for market definition**

11. Before proceeding to discuss why mobile DJ apps and DJ laptop applications fall within the same market, Serato acknowledges that what ultimately matters is that the statutory test is correctly applied and that all constraints are properly considered and given their correct weight. However, for the reasons explained below, Serato submits that the correct approach in this case is for the Commission to define a market for DJ software which includes both mobile DJ apps and DJ laptop applications.

12. Section 3(1A) of the Commerce Act 1986 defines a market as "a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them".

13. Of relevance to the Application, in *Brambles New Zealand Ltd v Commerce Commission* the High Court made the following observations about how section 3(1A) should be applied to define markets:[6]

    13.1 While market definition is an instrumental concept that helps to identify relevant competition issues, the statutory definition of a market and its focus on substitutability as a matter of fact and commercial common sense cannot be overlooked.[7]

    13.2 A focus on substitutability as a matter of fact and commercial common sense involves:

        (a) Prioritising consideration of the purpose of the products in question when considering whether they are in the same market. If products are technically substitutable and the evidence suggests they are being used for the same purpose, they fall in the same market.[8]

        (b) This can be the case even if the products are differentiated, as long as they fall within the same "price-product-service-package overall".[9]

        (c) On the demand side, individual customers may have a variety of different preferences for different products. However, if there is considerable use of those

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5 *Ex- post merger review report* at [39].
6 *Brambles New Zealand Limited v Commerce Commission* 2003 TCLR 868 (HC), HC AK CIV2115-03 (24 October 2003).
7 *Cf* Statement of Issues at [23].
8 *Brambles* at [132].
9 *Brambles* at [130].

> different products for the same purpose, they may still fall within the same market when assessed through the lens of commercial common sense.[10]

14. Given the requirement to consider out of market constraints as part of any competition assessment – and the ability to assert that they are being considered – it can be tempting to exclude products that are substitutable as a matter of fact and commercial common sense from the market to "better isolate the key competition issues". However, doing so would be an error and creates a risk that the competition analysis is misdirected. This is because a market definition that excludes relevant substitutable products risks overlooking, or at least underestimating, relevant constraints since they will be analysed through a lens of having already been ruled out as substitutes in the initial market definition exercise.

**Mobile DJ apps are close substitutes for DJ laptop applications for all users, not just beginners**

15. The Statement of Issues excludes mobile apps from the DJ software market on the basis that mobile apps "do not appear to be sufficiently close substitutes for laptop applications".[11] This finding is made despite the fact that mobile DJ apps and DJ laptop software both perform the same function of assisting DJs to deliver live DJ performances (either with or without DJ hardware). A key factor in this view is that "market feedback indicates that … apps are focused on beginners whereas laptop applications are focused on more advanced users", with apps having fewer features than laptop applications, designed for use on smaller screens, and unable to be used with all controllers.[12]

16. Serato submits that the characterisation of mobile DJ apps as being primarily for beginners does not properly reflect the role that they play in the market. It is important that the assessment of the degree to which mobile DJ apps are substitutable for DJ laptop applications takes place within a framework that uses objective and verifiable parameters, rather than vague "market feedback". After all, a market must be defined to include goods or services that are substitutable *"as a matter of fact* and commercial common sense".[13]

17. The Statement of Issues fails to specify any material way in which mobile DJ apps are inferior to or not substitutable for laptop applications. However, when the degree to which mobile DJ apps can be used as substitutes for DJ laptop applications is assessed using objective and verifiable parameters such as (a) functionality (including software features, physical factors such as screen size and compatibility with hardware) and (b) the uptake and usage of each type of software, it is clear that mobile DJ apps and DJ laptop applications do fall within the same market. The performance of mobile DJ apps and DJ laptop applications against those parameters is assessed in further detail below.

18. In addition, the characterisation of mobile DJ apps as being for beginners ignores the success that professional DJs have had while using them. For example:

    18.1 K-Swizz, one of New Zealand's best known DJs, won the 2022 DMC World DJ Championship using Algoriddim's app-based software in conjunction with DJ hardware.

    18.2 The professional DJ Laidback Luke performed his set at Tomorrowland 2023 (one of the world's largest electronic dance music festivals) using djay Pro on his iPhone, in conjunction with DJ hardware.[14]

    18.3 The hip-hop group Invisibl Skratch Piklz (one of the pioneers of turntablism) performed a full scratch performance on Algoriddim's YouTube channel using djay Pro on iOS.[15]

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10 *Brambles* at [132].
11 Statement of Issues at [26].
12 Statement of Issues at [27].
13 Section 3(1A) of the Commerce Act, emphasis added.
14 https://www.youtube.com/watch?v=ojybd_DYfkA&t=206s (see 7.35 to 7.50).
15 https://www.youtube.com/watch?v=nsdjZiIMUuw

18.4 Former world champion DJ, DJ Angelo, promotes DJing with an iPhone on his YouTube channel.[16]

18.5 [**Redacted**].[17] [**Redacted**]. [18]

19. The characterisation in the Statement of Issues of mobile DJ apps as for beginners ignores the reality that professional DJs would not risk using inadequate software products at world championships (let alone be able to win them) or for high profile performances such as Tomorrowland. These examples demonstrate that mobile DJ apps can be, and are, successfully used by users of all skill levels.

*Mobile DJ apps and DJ laptop applications are functionally equivalent, offering similar features*

20. The functional equivalence of mobile DJ apps and DJ laptop applications means that, as a matter of fact and commercial common sense, they must be treated as substitutable for one another. The functional equivalence of the different types of DJ software are reflected in:

20.1 the functionality available across ATC's rekordbox, Serato DJ, and other competing products (including mobile apps) in Annexure 9 of the Application. That comparison shows that there is considerable overlap in the core features of each type of offering; and

20.2 table 2.4 of NERA's cross-submission on the Statement of Preliminary Issues (**the NERA Report**), which shows that mobile DJ apps can and do offer the same features as DJ laptop applications. In fact, Algoriddim's djay Pro for iOS offers superior functionality.[19]

21. As with all DJ laptop applications, mobile DJ apps offer a range of functionality at different price points. Within any specific domain, a broad spectrum of laptop applications and mobile apps may be available, ranging from those with basic functionality to others that are highly sophisticated.

22. Some developers intentionally design and release apps that fulfil basic user requirements without encompassing the full suite of features found in more premium counterparts. These apps are often made available for free or at a minimal cost, with developers generating revenue through advertising. Alternatively, developers of DJ laptop applications and mobile DJ apps alike may adopt an intentional strategy to offer a combination of "basic" and "premium" packages with different revenue gathering models and at different price points.[20]

23. It is therefore not surprising that there are mobile DJ apps available that offer fundamental mixing capabilities, but lack the more complex features found in other apps and laptop applications.

24. However, the availability of more basic mobile DJ apps does not speak to the existing or potential capabilities of more advanced mobile DJ apps, or of the constraint those more advanced mobile DJ apps provide. In the same way that the Commission has not treated DJ laptop applications with very limited functionality as representative of DJ laptop applications more generally,[21] the presence of a few mobile DJ apps with limited functionality should not be treated as reflective of the functionality of (or the constraint provided by) all mobile DJ apps. It would be wrong to dismiss the competitive constraint that apps like djay Pro and Edjing Mix impose on Serato DJ, simply because there are other apps also in existence that offer more basic mixing capabilities and are pitched to beginner DJs.

25. In Serato's view, most mobile devices have more than enough processing power to ensure that DJ software runs smoothly, so that users experience no significant difference in performance compared

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16 https://www.youtube.com/watch?v=WPMBEudPnOE

17 [**Redacted**].

18 Commerce Commission interview with [**redacted**].

19 Algoriddim's djay Pro offers all of the functions available with Serato DJ Pro, plus additional sequencer (FX) and automix functionality.

20 For example, a "basic" app might be made available for installation and use for free or at minimal cost, with the developer selling advertising space within the app to generate revenue.

21 For example, MixMeister program4pc's DJ Music Mixer and Transitions DJ are examples of DJ laptop applications with more limited functionality.

with a laptop and audience members at live performances are unable to tell the difference.[22] With mobile DJ apps having now reached the point where they can and do offer the same (if not better) functionality as laptop applications, it is clear that there is nothing inherent in the capabilities of mobile DJ apps that make them unsuitable for more advanced users.

26. The functional parity and substitutability between mobile DJ apps and DJ laptop applications was notably demonstrated by K-Swizz, the New Zealand DJ that won the 2022 DMC World DJ Championship using Algoriddim's app-based software with hardware. K-Swizz defended his title by winning the 2023 edition of the DMC World Championship, but this time using laptop software with hardware.[23] However, after winning the 2023 championship, K-Swizz shared a video on social media where he reperformed his winning routine using djay Pro on his mobile phone with hardware.[24]

27. Serato submits that the vague and undetailed "market feedback" cited in the Statement of Issues to suggest that DJ mobile apps are suitable for beginners only does not reflect the facts.[25]

28. In fact, professional DJs are in fact the least likely to use DJ laptop applications. Those users generally prefer to use standalone DJ hardware with embedded software systems. This preference stems from a desire to reduce the need to rely on external devices and minimize the risk of system failure. Moreover, certain high-end nightclubs have embedded software systems installed permanently for use by various DJs (rather than having DJs bring their own hardware). Professional DJs also tend to have very little interaction with DJ laptop applications, and their laptops more generally, during a performance. So, the group for which the analysis in the Statement of Issues suggests mobile apps are least likely to be able to serve as a substitute for laptop applications (those with the most advanced requirements) is in reality the group that is least likely to use a laptop application for a DJ performance in the first place.

*The functional equivalence of mobile DJ apps and DJ laptop applications is not compromised by screen size*

29. Serato also disagrees that the screen size of mobile devices limits the usage of mobile DJ apps to beginners:

    29.1 It is incorrect to assume that smaller screen sizes are associated with beginners. Proficiency in DJing, as a music artform, requires keenly honed auditory and performance skills. In Serato's experience, the vast majority of DJs who use software to perform (whether hobbyists or professional) do so in conjunction with DJ hardware. DJ hardware with embedded software, used by the most advanced DJs, usually has smaller displays that are comparable in size to screens on mobile phones.[26] The DJ will predominantly use the hardware interface to control the DJ software and access its features, rather than screens. As previously noted, even the DJs who do use laptops when performing tend to limit their interactions with the laptop and software during a performance. This reflects the widely shared belief among DJs that optimal performance requires a DJ to properly engage with their audience and the sounds of the music, and avoid becoming fixated on their screen.[27]

    29.2 To the extent that some users (of any skill level) may prefer larger screen sizes, they can opt for tablets, such as iPads, which offer the same screen dimensions as laptops. In addition, an app's display can be designed to adapt to different screen sizes, similar to what web pages do. For example, Algoriddim's djay app has different versions for iPads and mobile phones,

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22 Identifying the precise moment when mobile processing power became broadly comparable to that of laptops is challenging. However, Serato recognises a significant milestone in this evolution with Apple's introduction of the A9 chip in 2015/16, utilised in the iPhone 6S and 6S Plus. Apple marketed this chip as offering "desktop class" performance, marking a notable advancement in the capabilities of mobile devices.

23 https://www.youtube.com/watch?v=lrXFmNjNQZ0

24 https://www.instagram.com/p/C3Jltv8pMzy/?hl=en

25 Statement of Issues at [27].

26 DJ screens are commonly 6-9 inches wide. The iPhone 15 range has screen sizes ranging from 6.1-6.7 inches, and the current Samsung range (the Galaxy S24 range, the Galaxy A54, the Galaxy A53, the Galaxy A33 and the Galaxy A54) have screen sizes ranging from 6.8 inches.

27 See, for example, https://www.youtube.com/watch?v=5c-4xS8i_m8.

and those versions display differently. Consumers' willingness to work with mobile screen sizes for all kinds of activities is also constantly evolving. For example, most consumers of news content have moved on from a previously strong preference to read their news on large newspapers. They are now quite willing to read the news on small screens, as this allows them to take advantage of the greater portability and convenience that mobile apps and devices have to offer.

29.3 The Statement of Issues leans heavily on a single interview as evidence for its claim that "apps are designed for smaller screens, which reduces the range of features that they display".[28] The weight that has been attributed to this single statement is questionable. As well as being inconsistent with the nuances of what makes a DJ performance successful (as described above), notably, the party that made that statement, [**redacted**].[29]

*The majority of mobile apps are compatible with controllers*

30. The Statement of Issues appears to apply a standard to mobile DJ apps that requires them all to be compatible with DJ controllers in order to be considered in the same market as DJ laptop software.[30] This appears to be a higher standard than what applies for DJ laptop software, where any individual application will not necessarily be compatible with all controllers either.

31. While every mobile DJ app may not be compatible with every controller, the reality is that the proportion of mobile apps and laptop applications that are compatible with DJ controllers is relatively similar. Serato conducted a comparative analysis to identify the extent to which DJ controllers were officially supported by each of Serato and djay Pro for iOS. It found that:

31.1 Of the 50 most popular DJ controllers used with Serato DJ,[31] [**redacted**] officially supported by Serato were also officially supported by Algorithm djay Pro for iOS (which increases to [**redacted**] when the 20 most popular DJ controllers are considered).

31.2 For [**redacted**] of the 91 DJ controllers ([**redacted**]%) officially supported by Algoriddim djay Pro for iOS,[32] Serato either already offered official support or Serato was currently in the process of developing such support.[33]

32. In other words, the proportion of controllers supported by Serato but not Algoriddim's djay Pro was materially similar to the proportion of controllers supported by Algoriddim's djay Pro but not Serato. This is inconsistent with the suggestion in the Statement of Issues that apps do not offer the same compatibility with hardware controllers.

33. In addition, djay Pro offers a "MIDI Learn" feature that allows a user to MIDI map the hardware controls of any iOS-compatible controller to functions in djay Pro, if the controller is not already supported by djay Pro.

34. Further, in practice DJ software providers do not "officially" provide universal support for all DJ hardware products. Official hardware support, whether for current, past, or future models, requires development time and resources. Consequently, DJ software firms target hardware that is most likely to boost software sales (i.e. enjoys widespread popularity among DJs or fits their target demographic).

35. In Serato's view, the fact that Algoriddim's djay Pro has similar levels of compatibility with DJ controllers as Serato is an expected market outcome reflecting consumer demand and technological

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28 Statement of Issues at [27.1].
29 Commerce Commission interview with [**redacted**].
30 Statement of Issues at [27.2].
31 Assessed over the period 1 January 2023 to 31 January 2024 based on the number of Serato users who connect the DJ controller to Serato DJ.
32 https://www.algoriddim.com/hardware#ios
33 Serato is currently in the process of officially supporting [**redacted**] further DJ controllers which are currently supported by djay Pro iOS.

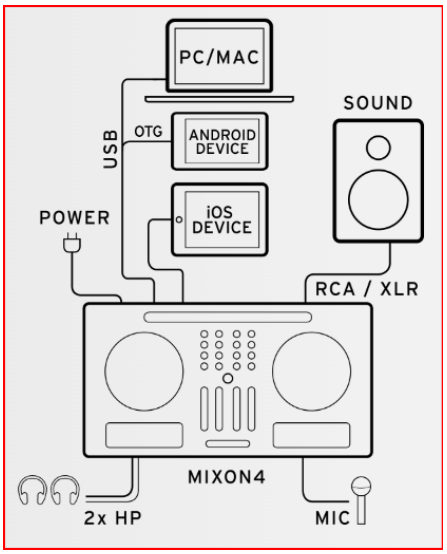
advancements. In addition to app developers themselves being incentivised to have high rates of compatibility, DJ hardware manufacturers are also aware that their customers expect to be able to use mobile DJ apps with their equipment. This is evident in marketing material produced by DJ hardware manufacturers. Some DJ controllers have features specifically designed to attract users of mobile DJ apps. For example: [34]

35.1 Reloop states on its website:

> *While DJing with a computer has been an industry standard for many years, DJing using smart devices, such as iOS and Android-based systems, is fast becoming a popular option. There is a great selection of controllers for DJing with smartphones and tablets out there, with solutions for beginners and advanced users.*

35.2 Reloop showcases how its controllers can be setup with a laptop or a smartphone / tablet device. For example:

**Figure 1: Reloop marketing material showing controllers being used with laptops and mobile devices**




35.3 Reloop's flagship DJ controller, the Mixon 8 Pro, has been specifically built with a docking station to hold a tablet device and it is marketed as being compatible with both DJ laptop applications and mobile DJ apps:[35]

[34] https://www.reloop.com/djing-with-smartphones-and-tablets
[35] https://www.reloop.com/reloop-mixon-8-pro

**Figure 2: Marketing material for Reloop's Mixon 8 Pro with an in-built docking station for tablets and app compatibility**


36. This marketing strategy highlights that DJ hardware manufacturers consider mobile DJ apps to be directly substitutable for DJ laptop applications. It also suggests that Reloop understands the value in demonstrating compatibility with both DJ laptop applications and mobile DJ apps as the number of DJs prefer to use a mobile app continues to increase. It is difficult to explain why products such as Reloop's would be in the market and promoted in this manner if, as suggested by the Statement of Issues, the only DJs using mobile apps are beginners who will switch to a laptop application in the longer term.

**Mobile DJ apps are a significant constraint**

37. Data from data.ai indicates a significant number of DJ sessions are now conducted on mobile phones or tablets.[36] Serato's view is that this likely reflects particularly strong support from the demographic aged under 35, which is most open to the use of apps for any purpose (such as booking flights, accommodation, ordering food, transport, music, video streaming etc). They are also more likely to currently be "new" to DJing (which may explain mischaracterisations of mobile DJ apps as being targeted towards beginners).

38. Under-35s are a key demographic for providers of DJ laptop applications and mobile DJ apps alike. [**Redacted**]. [37]

39. As noted above, mobile DJ apps have comparable functionality to DJ laptop applications. In fact, mobile DJ apps have significant advantages over DJ laptop applications. In particular, both mobile DJ apps and DJ laptop applications enable users to immediately start mixing tracks from their personal music libraries, offering advanced features such as mixing tools, effects, and looping capabilities without first needing to purchase DJ hardware at a relatively high upfront cost. This accessibility taps into a vast potential user base, including some who might not otherwise have considered DJing, and allows those users to seamlessly integrate DJing into their increasingly digital lifestyles.

40. However, while DJ laptop applications do provide a path to DJing that does not require new users to immediately commit to purchasing hardware, they lack the intuitive, tactile engagement that mobile DJ apps offer. Mobile DJ apps transform touchscreen devices into interactive DJ decks, closely mimicking the physical experience of using DJ hardware. This tactile interaction is more engaging and significantly lowers the learning curve, making it easier for users to grasp the intricacies of DJing. The

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36 [5.11] of the Application.

37 [**Redacted**].

immediate feedback from touching a screen, as opposed to navigating with a mouse, enhances the learning experience, making it more enjoyable and effective. If DJing without hardware, using a mobile DJ app provides a superior experience compared with a laptop application. If DJing with hardware, the experience is the same – if not better.[38]

41. Accordingly, mobile DJ apps are particularly well positioned to attract users at an early stage. It follows that those users will want to continue using that app when they are ready to commit to purchasing hardware – prompting them to seek hardware that is compatible with the mobile DJ app they have been using. This explains the high level of compatibility described above.

42. Mobile DJ apps are also better suited to the changing habits of music consumption. Music is increasingly consumed by casual listeners and DJs alike through music streaming services delivered on mobile apps, rather than by purchasing individual tracks from an online music store and storing them on a laptop.[39] The mobility of smartphones and tablets allows users to practice DJing on the move. The vast majority of DJs are hobbyists or part-time, with only a small fraction performing professionally at clubs or festivals. The portability of mobile devices enables users of mobile DJ apps to engage in DJing (including practice and music preparation) in situations where using a laptop might be impractical, such as during daily commutes on a bus or train, or while being a passenger in a car. This portability enables mobile DJ apps to better meet users' needs.

43. The use of DJ apps by professionals to win competitions (as noted at paragraph [18] above), entertain global audiences at major festivals, and engage with fans online confirms the importance of app-based DJing in the modern music scene. As professional DJs use mobile DJ apps at high profile performances and promote mobile DJ apps, the uptake of apps amongst other users will continue to be strong.

44. Further, web articles on popular DJ sites and online content created by influential DJs illustrate the importance of mobile DJ apps in the DJing industry. For example:

**Table 1: commentary highlighting the importance of mobile DJ apps**

| # | Source | Comment |
|---|---|---|
| 1 | CrossFader (YouTube channel of the online DJ school with 583k subscribers)[40] | "Are iPads replacing laptops for DJs" – a video illustrating that an iPad with DJ software apps can be used with professional controller.<br><br>The presenter poses the question "*if you can take something as small and as portable, and as powerful as the iPad in the club and use it the same way as laptops currently, why would we use laptops at all?".* Many of the comments agree that laptops are not necessary. |
| 2 | Pri yon Joni (DJ artist with a YouTube channel with 61.6k subscribers)[41] | Pri yon Joni illustrates how an iPhone or iPad can be used with DJ hardware and operated with DJ software apps. |
| 3 | Digital DJ Tips (YouTube channel of the online DJ school with 73k subscribers)[42] | The video illustrates the 7 most popular ways to DJ, including DJing using a portable device (such as a phone or tablet).<br><br>On apps (from 15:00): "Your phone has got all the technology you need… Of course you can DJ on your phone." |

38 As explained at [29], smaller screen sizes can facilitate better audience engagement and a better performance overall.

39 This development is discussed further in Section B.

40 https://www.youtube.com/watch?v=HhbVDJkt2sA

41 https://youtu.be/LOfzAVfl468?si=um293FJDW-OSfCe0

42 https://www.youtube.com/watch?v=UFU-ATiYN5k

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|---|---|---|
| 4 | DJ Tech Tools[43] | The article from DJ TechTools provides a detailed guide on using any MIDI controller with Algoriddim's djay Pro and Mixvibes' Cross DJ Pro apps on iOS. |
| 5 | Beatsource Tech (YouTube channel with 192k subscribers)[44] | Illustrates how a controller can be used with Algoriddim djay using a phone or a tablet. |
| 6 | DJ Spiegal Spin[45] | DJ illustrates how it is possible to DJ with an iPad and argues that the iPad is the best way to DJ in 2023. |
| 7 | DJ Tech Tools[46] | The DJ TechTools article discusses the edjing Mix app by DJiT, which features DVS and MIDI support.<br><br>The article notes that while DJs may be reluctant to use a phone to DJ in a club, the app can be plugged into hardware. When contrasting with Serato, the article concludes "Just as DJs use Serato or Traktor Scratch, edjing Mix offers the same capability except with the convenience of being on a device that fits in a pocket". |
| 8 | Jake Hill (a senior marketing manager from inMusic who has a popular YouTube channel)[47] | Jake illustrates how a Rane One controller can be used with djay Pro using an iPhone. |
| 9 | Sara Simms (an innovative DJ, turntablist and electronic music producer)[48] | In this article, Sara evaluates the DJ software app edjing Pro to access how viable it is to use an iPad as a DJing platform. In respect of edjing Pro, Sara finds that "Overall, edjing Pro is a great app that can be used by both professional and beginner DJs". |
| 10 | Laidback Luke (popular DJ)[49] | In this video, Laidback Luke explains his switch from Denon hardware to Reloop hardware. This switch was driven by his desire to use Algoriddim's djay Pro AI app. He compares the shift to app-based DJing with the shift from vinyl based DJing to CDJs.[50] |

45. Serato acknowledges the results of 2024 DJ Census, but submits that those results need to be treated with caution. It appears that the same respondents may complete the DJ Census each year, suggesting that the survey may be affected by biases linked to the age and experience of its respondents and it may not be representative of all users. Instead, the survey seems to predominantly reflect the views of an older demographic within the DJ community, which may not reflect the evolving preferences of wider DJ market. Notably:

45.1 In response to the question "which of these computing devices do you have and use regularly?", which allowed respondents to select more than one option, only 12.09% of

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43 https://djtechtools.com/2018/07/10/how-to-use-any-controller-with-djay-pro-cross-dj-pro-ios-dj-apps/
44 https://www.youtube.com/watch?v=tMvwn-apWFw
45 https://www.youtube.com/watch?v=5r-XL-KhYws
46 https://djtechtools.com/2016/09/16/edjing-mix-djits-app-dvs-support/
47 https://www.youtube.com/watch?v=G7jd-ailrZs
48 https://macprovideo.com/article/audio-software/review-edjing-5-and-edjing-pro
49 https://www.youtube.com/watch?v=-TxgiTyw9zw&ab_channel=LaidbackLuke
50 In this video, Laidback Luke shares his decision to switch from Denon to Reloop hardware for use with djay Pro on iOS, inspired by his encounter with Algoriddim's AI mixing technology on a mobile app. Laidback Luke describes this moment as witnessing "the future of DJing, right in front of my eyes!" He draws an analogy between everyday uses of smartphones—for Zoom meetings, ordering food, booking hotels and flights, communicating, and even finding love—and the potential for DJing, asking rhetorically, "Why can't we DJ from our phones?" He states, "That is the essence; the future of real DJing is here!" This perspective underscores the evolving landscape of DJing, where mobile technology plays a significant role.

respondents confirmed that they own and regularly use an iPhone or an Android smartphone device. This reported usage of smartphones among the survey participants is remarkably low, and does not reflect iPhone or Android smartphone usage among the general population. It is therefore unsurprising that the adoption of DJ mobile apps among the survey respondents is also low. Serato submits that the extraordinarily low proportion of survey respondents who regularly use smartphones mean that the DJ Census's figures about DJ mobile app usage are simply not credible.

45.2 In 2014, 39.12% of respondents were 35 years or older, a figure that has on average increased each year, reaching 73.82% in 2024. By applying a median age to the age ranges provided in the DJ Census, the average age of respondents has risen from 31.8 years in 2014 to 42.1 years in 2024.[51] This 10 year increase in the average age over a similar period suggests that the DJ Census may be capturing the perspectives of a relatively stable, aging group of DJs over time (being the aging readership of DigitalDJTips who consume this type of digital media).

45.3 The survey also shows that 53.92% of the 2024 participants are seasoned DJs with over 10 years of experience, indicating they began their DJing careers before 2014. This period coincides with the peak popularity of DJ laptop software and controller setups, which could explain their continued preference for this type of equipment.

46. Considering these factors, Serato submits that the DJ Census's findings do not reflect the current trends and preferences within the broader DJ community, particularly among younger, emerging DJs who are not part of the survey, but are more open to embracing mobile app technology. The DJ Census shows that a particular segment of the market continues to prefer to use a laptop. However, the DJ Census says nothing about the extent to which particularly younger DJs prefer to use a mobile phone.

*Cross-platform functionality is advantageous*

47. Given the capabilities of mobile DJ apps (which often match or surpass those of laptop applications), their compatibility with a broad array of hardware, and the advantages they offer in terms of portability and alignment with modern music consumption habits, the lack of a mobile app for DJ Serato puts Serato DJ at a competitive disadvantage.

48. [**Redacted**].[52]

49. [**Redacted**].

50. In these circumstances, Serato continues to compete in the DJ software market using just its laptop-based offering. In that regard, importantly for Serato, it is still the case that users' choice of software is not solely driven by the platform the software is hosted on. Rather, users are likely to select software based on, as *Brambles* puts it, the overall price-product-service package. Platform and portability are just one element of this overall package, albeit an element in respect of which Serato is disadvantaged.

51. Still, it is obvious that DJ software providers who do offer cross-platform functionality have an advantage over those who do not. If a software product offers equivalent functionality on another platform, users may seamlessly transition between devices as needed. This behaviour mirrors the

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51 For the age range "under 18" we have assumed a minimum age of 15, and for the age range "over 55" we have assumed a maximum age of 65.

52 [**Redacted**].

broader trend of how people interact with various software across different platforms.[53] [**Redacted** ].[54]

*Impact of mobile DJ apps on Serato's DJ software business*

52. The Statement of Issues notes the Commission has "seen limited evidence to suggest that the rise in the sale of apps has materially affected sales of laptop applications".[55] It is not clear what this evidence could ever be. While it is true that Serato has experienced growth in recent years, there is no way of telling how much growth Serato would have experienced were it not for the emergence of mobile DJ apps as an alternative way to perform identical functions as can be performed on Serato's own software via its DJ laptop application. It is not reasonable for the Commission to infer from growth of Serato sales in absolute terms that the extent of this growth has not been impacted by mobile DJ apps. On the contrary, the only reasonable inference is that the growth of mobile DJ apps has come at least in part at the expense of existing players producing software that performs the same functions on a laptop application. In this regard, Serato does not share the view of "[o]ne DJ software provider" that the impact of Algoriddim is "probably small".[56] The reality is that we do not know. However, it would be foolish for Serato to assume that mobile DJ apps are not having a significant impact on its business.

53. The Statement of Issues notes a theory from a market participant to the effect that customers may use free (or cheap) apps to start and then "later switch to a laptop application when they are ready to pay for software".[57] The Commission infers from this theory that "the growth of apps may be reaching new customers rather than becoming substitutable for laptop applications."[58] In response, Serato notes the following:

    53.1 Serato knows of no basis on which to substantiate this market participant's theory and has not seen any data to support it.

    53.2 If Serato were similarly to speculate about the behaviours of users who start on free or cheap mobile DJ apps, it would be that:

        (a) they have chosen the free version of a mobile DJ app in preference to the free version of a DJ laptop application because they prefer the convenience of a phone as compared with a laptop;

        (b) to the extent they seek to upgrade at some point to access greater functionality, they are most likely to upgrade to paid versions of the same mobile DJ app that they have become accustomed to using and that continues to accommodate their preference of availability on their phone.

    53.3 Serato actively seeks to recruit users of Serato Lite and then "convert" them to Serato DJ Pro. Developers of mobile DJ apps have exactly the same incentives and it is inconceivable that their strategy would be to provide free services with a view their customer base at some point being monetised by the providers of DJ laptop applications.

54. It is true that Serato's subscription prices have been "stable" for a period.[59] In fact, the baseline subscription price has not changed from its initial launch price of $9.99 in 2016. Of course, as the Statement of Issues acknowledges, this implies a fall in real prices.[60] Serato's pricing for Serato DJ Pro

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53 Many services (such as Facebook, Instagram, TikTok, TradeMe, etc.) offer both app and web-based access, demonstrating that users are comfortable navigating between platforms.

54 [**Redacted**]

55 Statement of Issues at [28].

56 Statement of Issues at [28.2].

57 Statement of Issues at [28.2].

58 Statement of Issues at [28.2].

59 Statement of Issues at [28.1].

60 Statement of Issues at [28.1].

was originally set primarily with the objective of [**redacted**]. The fact that Serato has never increased this price reflects a range of factors including:

54.1 strategic objectives of [**redacted**];[61]

54.2 the ongoing competitiveness of the DJ software market, including the availability of alternative DJ software both in the form of DJ laptop applications and mobile DJ apps.

55. In other words, mobile DJ apps are an important element of an overall environment which has resulted in Serato's pricing remaining stable in the manner observed by the Commission in the Statement of Issues.

**Conclusion: mobile DJ apps are in the DJ software market**

56. In summary, Serato submits that mobile DJ apps clearly fall within the same DJ software market as DJ laptop applications. They offer the same functionality as DJ laptop applications and professional DJs use mobile DJ apps with high levels of success. To the extent that the Statement of Issues characterises mobile DJ apps as for "beginners" only, Serato submits that this may be a misconception occurring due to the fact that mobile DJ apps are particularly attractive to the "next generation" of DJs.

**Music production software is also a relevant constraint**

57. The Statement of Issues excludes music production software from the DJ software market, and suggests that DJs do not use music production software to perform DJ sets in significant numbers and would be unlikely to in response to a price increase.[62]

58. For example, while the DJ Census underrepresents DJs aged 35 years and younger, the 2024 DJ Census revealed that approximately 87% of respondents are either actively producing, have tried to produce, or are interested in producing their own music. This significant interest in music production suggests that software capable of the dual functions of enabling DJ performances and music creation would be appealing to a significant segment of the market.[63] This is reflected in Serato's own investment decisions, with Serato offering "Serato Flip" (which offers enhanced music editing capabilities) as an expansion to Serato DJ Pro.

59. The Statement of Issues cites the 2023 DJ Census as evidence that "only a small number of survey respondents said they used music production software Ableton Live to DJ".[64] Serato submits that the 1% usage figure in the 2023 DJ Census is unlikely to fully capture its use as a tool for DJing. Notably, between 2014 and 2016, when respondents could select multiple software options when responding to the question regarding what DJ software they use, approximately 17% indicated they used Ableton Live.[65]

60. While Serato acknowledges that not all music production software meets the functional needs for DJing, Serato submits that music production software is in fact used by a competitively significant subset DJs to perform DJ sets. It therefore imposes a constraint on Serato, and would similarly impose a constraint on the merged entity. Although music production software may not be used by, for example, mobile wedding DJs (whose focus is on playing popular tracks), it does have a strong appeal among DJs who value music production as part of their performance toolkit. Music production

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61 [**Redacted**].

62 Statement of Issues at [32] and [33].

63 As discussed in [45] above, there is good reason to question the representativeness of the 2024 DJ Census. However, while the 87% figure cited here may not be representative all DJs, it is at least indicative that a high proportion of a particular segment of DJs have an interest in using music production software.

64 Statement of Issues at footnote 19.

65 The percentage of respondents who used Ableton Live in the DJ Census across these years is as follows. 2014: 16.21%; 2015: 17.19%; 2016: 17.49%

software such as Ableton Live is frequently chosen by DJs who engage in complex mixing and music remixing, and are interested in creating intricate mashups or remixes.

61. The use of Ableton Live by DJs for DJing is confirmed by:

61.1 The availability of DJ controllers which are integrated with Ableton Live. For example, inMusic has an Ableton Live controller for DJing with a crossfader, which is marketed as appropriate for DJing:

> "Whether you are an electronic music artist and Live is your canvas, *a DJ using Live for performance and real-time mixing*, or a more traditional musician using Live on stage or in the studio, you will find the APC40 mkII to be the intuitive, powerful instrument that directly links your inspiration with Ableton Live."[66] (emphasis added)

61.2 The use of Ableton Live for DJ performances;[67] and

61.3 The ready availability of training resources and courses on DJing with Ableton Live.[68]

62. Serato therefore submits that music production software should be considered as a constraint on Serato and the merged entity.

## B. Competition in the DJ software market must be understood in context

63. Before assessing whether the proposed acquisition would substantially lessen competition, it is important to understand the characteristics of competition in the DJ software market. Those characteristics include:

63.1 the functions that DJ software seeks to perform;

63.2 how DJs make purchasing decisions about hardware and software; and

63.3 the need for DJ hardware and software providers alike to meet DJs' expectations about hardware and software compatibility.

*DJ software providers seek to offer functionality for both performance and music management/preparation and quickly match each other's innovations*

64. The capabilities of DJ software can be divided into two main functions:

64.1 A **performance function** to enable DJs to perform live. DJs need to be able to play and manipulate digital tracks, mix them, and add various effects in real time. This is the primary

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66 https://www.akaipro.com/apc40-mkii.html

67 For example:
- https://www.youtube.com/watch?v=RvRhUHTV_8k : Ben Böhmer live above Cappadocia in Turkey for Cercle
- https://www.youtube.com/watch?app=desktop&v=ut-A0Qkf9qo : notable NZ DJ Tom Cosm showing his DJ set using Ableton Live
- https://youtu.be/hVmbLMCVnDk?si=-vQUfrSYR0-kofGm : Tokimonsta Boiler room set on Ableton Live/Akai APC40
- https://www.youtube.com/watch?v=vabvf4TiAWM : Alex Fain - 66 min Live mix - Deep House - Apc40 MKII with Ableton.

68 For example:
- https://warpacademy.com/course/djing-with-ableton-live/
- https://www.udemy.com/course/dj-with-ableton-live-includes-a-full-warping-course/
- https://www.loopmasters.com/genres/121-Music-Courses/products/5502-Ableton-Live-DJ-s-Guide
- https://courses.djcoursesonline.com/p/djing-with-ableton-live
- https://learn.landr.com/course/mixing-ableton

purpose of DJ software, as the essence of DJing lies in mixing recorded music for audiences at clubs, parties, or other events; and

64.2 A **music management/preparation** function, where DJs use the software to help them store, organise, manage and prepare their music libraries for performances. This function broadly breaks down into the following sub-tasks:

(a) storing music and creating playlists;

(b) tagging tracks with metadata to streamline access and use during live performances (such as beats per minute, key, genre, beatgrids, waveform, cue points and loops); and

(c) editing and remixing a track, such as modifying its length, adding audio effects, or enhancing the sound in various ways, and storing such edited / remixed song for later use.

65. The performance function can be performed by standalone software or embedded software.

65.1 Standalone software is a software application or app that can be operated on a laptop or other mobile device, either using that device alone or, more commonly, alongside DJ hardware. When paired with DJ hardware, in particular a DJ controller, the controller can serve as the physical interface which controls the software – similar in function to a computer keyboard, but offering a more tactile experience comparable to traditional DJ setups. The DJ software market offers a broad spectrum of DJ software catering to the performance function, ranging from basic to advanced.

65.2 Embedded software is integrated directly into DJ hardware, such as CDJs and all-in-one DJ systems. Embedded software performs similarly to standalone software but does not require use of external devices. This offers a seamless solution that merges the tangible feel of hardware with the adaptability of digital music. DJs using embedded hardware typically use laptop software or apps for music management/preparation, and then transfer their music to the DJ hardware via USB or cloud storage for performance. DJ hardware manufacturers that produce embedded hardware will generally develop the embedded software that is used in such hardware.

66. Patterns for music consumption and storage for consumers have in general been shifting away from the purchase of individual tracks on online music stores to the use of subscription-based music streaming services. DJs' patterns of music consumption are going through a similar shift. DJs are increasingly seeking DJ software that integrates with streaming platforms and storing their music libraries on the cloud. This means that the music management function of DJ software is also needing to evolve by being able to integrate with the music streaming and cloud-based services where DJs access and store the music they listen to and work with.

67. When innovation occurs, competing DJ providers quickly move to replicate and improve upon those innovations capable of having any meaningful competitive impact. DJ software providers generally differentiate by offering different combinations or packages (from basic to more advanced) at different price points.

68. The two most significant recent developments in DJ software functionality have been:

68.1 The development of stems technology;[69] and

[69] Stems technology is the ability to isolate different parts of a track, for example, the vocals, the drums, the bassline, etc.

68.2 Integration with music streaming platforms, to align with changes in DJs' preferred methods of accessing and consuming music.

69. As discussed further below in Section C, both of these innovations have been driven by app-based software providers.

*A DJ's profile will affect the sequencing of their purchasing decisions about hardware and software*

70. How a DJ makes decisions about the hardware and software they will purchase is influenced by their profile, i.e. if they are a beginner or a more advanced user. However, rather than their profile determining their willingness to use mobile DJ apps (as suggested in the Statement of Issues), their profile affects the sequencing of their purchasing decisions for DJ hardware and software.

71. Beginners or entry-level customers have historically tended to make a combined hardware/software purchasing decision, where they will first choose the hardware they would like and then select software that is compatible with the hardware (which is often the software packaged "in-box" with the hardware). This is not surprising, given that DJ hardware costs significantly more than DJ software and, often, the software is free. However, with the introduction of mobile DJ apps, new DJs are more likely to start DJing before they commit to purchasing hardware. As discussed at paragraphs [39[ to [41] above, a DJ who has started out using a mobile DJ app without hardware is more likely to have enjoyed that experience and seek hardware that is compatible with the software they already use, than a DJ who has started out using a laptop application.

72. Existing DJs seeking to upgrade their equipment are more likely to look for hardware that is compatible with the software product they already use. However, the ability to MIDI-map hardware and software means that changing hardware providers does not necessitate changing software providers if their current software provider does not "support" their new hardware of choice, and vice-versa.

73. In this respect, although the Statement of Issues refers to evidence[70] that "customers will ask for a Serato controller, not a Pioneer DJ or Roland controller", that statement relies on anecdotal evidence from just one industry participant. Although Serato does have some concerns about the reliability of the DJ Census and the extent to which it is representative of the market, the 2024 DJ Census results show that 63.36% of respondents indicated that quality and durability was a top priority in their hardware purchasing decisions. Integrations, which would include software integration, ranked significantly lower. This data is consistent with Serato's understanding of how DJs make their hardware and software purchasing decisions. Between 2018 to June 2023, Serato offered customers trialling Serato DJ Suite a prize draw incentive to complete a survey. In response to the question "How did you find out about Serato DJ Pro?" the most popular response was that the "software came with my device".

74. A DJ may also consider changing the software they use if the software they are accustomed to has fallen behind in the process of matching the functionality of other software in the market. The ease of switching is discussed further in Section C.

*Compatibility between software and hardware is important for DJs and suppliers alike*

75. The use of **MIDI** (Musical Instrument Digital Interface) and **HID** (Human Interface Device) protocols with DJ hardware ensures that new DJ software can achieve universal compatibility with hardware products. This technical standard allows for individual DJs and other industry participants to map software to hardware without an operating commercial relationship between the software and hardware suppliers in question. This facilitates DJs being able to choose from a broad range of software options regardless of their choice of hardware, and vice versa.

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[70] Statement of Issues at [71.3].

76. Serato understands that a DJ hardware manufacturer would not seek to depart from the MIDI and HID protocols. Doing so would likely generate considerable backlash from users, require them to revamp their entire manufacturing process, and, to the extent that they also manufacture other hardware for the music industry more generally which also uses the MIDI and HID protocols, remove their ability to achieve synergies in the manufacturing process. The fact that all DJ hardware manufacturers use the MIDI and HID protocols also makes it materially simpler for DJ software providers to integrate their software product with the hardware.

## C. The proposed acquisition will not substantially lessen competition in the DJ software market due to unilateral effects

77. The Statement of Issues identifies Serato as "the leading DJ software" and rekordbox as [**redacted**] and a competitor increasing in strength.[71] It goes on to suggest that the constraint from other DJ software providers, in particular Virtual DJ and Traktor (laptop applications), Algoriddim's djay Pro AI (an app) and inMusic's Engine DJ (embedded software) would not be sufficient to replace the competition between Serato and rekordbox that might be lost with the proposed acquisition.[72]

78. For the reasons outlined below, Serato submits that the proposed acquisition will not substantially lessen competition due to unilateral effects:

    78.1 The competition between Serato and rekordbox is not especially strong. Rekordbox [**redacted**]. Even so, its emergence reflects relatively low barriers to entry;

    78.2 The strong competition from other providers, including growing competition from mobile apps, will continue to constrain Serato following the proposed acquisition; and

    78.3 The barriers to entry and expansion are low.

79. In addition, the strong competition from independent market participants will be supported by the incentives for Serato and rekordbox to continue to compete created by the earnout mechanism in the SPA. Accordingly, even if the constraint Serato and rekordbox impose on one another is considered important, that competition will continue post-acquisition.

**Competition between Serato and rekordbox is not especially strong**

80. Broadly, Serato's perspective on the rekordbox as a competitor is that rekordbox [**redacted**]. In particular, rekordbox has not had any notable impact on Serato's competitive approach, which has been more heavily influenced by the likes of Algoriddim, Virtual DJ and Traktor. Serato acknowledges that rekordbox DJ software has accumulated market share, but that largely reflects ATC's channels to market as a hardware provider and the low barriers to entry in this market for players with industry experience and expertise. Moreover, Serato and rekordbox target different segments of the DJ software market. In any case, competition between Serato and rekordbox is set to continue following the proposed acquisition (although Serato does not rely on this point).

81. These points are discussed further below, but it is useful to first recap how and why ATC entered the DJ software market.

*Serato's understanding of how and why ATC entered the DJ software market*

82. ATC is fundamentally a hardware company. Pioneer-branded DJ equipment has been available in the market since 1994, and the Pioneer brand is recognised as a leading brand in DJ hardware products.

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71 Statement of Issues at [52], [**redacted**] and [62].

72 Statement of Issues at [70].

83. Pioneer is a renowned innovator in DJ hardware. For example, Pioneer has introduced the following features in its DJ hardware, which were [**redacted**]:

**Table 2: Examples of Pioneer innovations in DJ hardware [redacted] [partially confidential]**

| Pioneer product | Year of release | Description / significance | [redacted] |
|---|---|---|---|
| Pioneer DJ DDJ-SX | 2012 | Four channel controller, static platters, 2x4 pads below platters, FX layout. This was the first DJ controller to combine the now standard two platter with 2x4 performance pads layout. | [**redacted**] |
| Pioneer DJ DDJ-SR | 2013 | Two channel controller, static platters, 2x4 pads below platters, FX layout | [**redacted**] |
| Pioneer DJM-S9 | 2015 | Two channel battle mixer, 2x4 pads, FX paddles. This was the first two channel scratch mixer that includes 2 sets of 2x4 performance pads, paddles and inbuilt effects; | [**redacted**] |
| Pioneer DDJ-SP1 | 2013 | Pad accessory controller with FX and library controls | [**redacted**] |
| Pioneer DDJ-1000/SRT | 2019 | 4 channel controller with static platters and complex displays in the platter housing | [**redacted**] |
| Pioneer XDJ-XZ | 2019 | 4 Channel embedded hybrid controller with multiple complex screens | [**redacted**] |
| Pioneer XDJ-RX | 2015 | 2 channel embedded hybrid controller with central complex screen | [**redacted**] |

84. Other examples of significant innovations in DJ hardware by Pioneer include:

84.1 1994 – CDJ-500: the world's first CDJ, a top-loading CD deck designed for professional DJ use.

84.2 1996 – DJM-500: the world's first four-channel DJ mixer with onboard effects

84.3 1998 – CDJ-100s: the first CDJ with built-in jog wheel-controllable effects

84.4 1998 – EFX-500: the world's first dedicated DJ effects unit

84.5 2001 – CDJ-1000: the first ever CD player to replicate vinyl control

84.6 2002 – DMP-555: multimedia player that was the first to be able play MP3s from an SD card as well as from a CD

84.7 2004 – DVJ-X1: the world's first DJ DVD player to manipulate video via vinyl control

84.8 2004 – DJM-909: the first two-channel scratch DJ mixer with a touch screen LCD screen as well as onboard effects

84.9 2008 – SVM-1000: the first four channel DJ video mixer with touchscreen

84.10 2016 – CDJ-TOUR1 and DJM-TOUR1: a CDJ and mixer system that includes 13-inch, full-colour touch screens with built-in CPU

84.11 2017 – Rev7: the first motorised platter controller to mimic a turntable and full scratch mixer with central performance pads

84.12 2023 - PLX-CRSS12: the first hybrid MIDI platter and analogue turntable combination.

85. Although Pioneer has been a key driver of innovation in the hardware market, Serato acknowledges that there are multiple other DJ hardware providers who have also innovated:

**Table 3: Innovation by other DJ hardware providers [redacted] [partially confidential]**

| Original product | Description | [redacted] |
|---|---|---|
| Vestax VCI-380 | Two channel controller, static platters, 2x4 pads above platters, FX layout | [**redacted**] |
| Rane SL Series (predates InMusic) | Multichannel interfaces for DVS | [**redacted**] |
| Numark NS7 | Motorized platter controller with 2 platters | [**redacted**] |
| Numark Scratch | 2 channel battle mixer, 1x4 pads, FX paddle | [**redacted**] |
| Reloop RP8000 | Turntable with MIDI controls | [**redacted**] |

86. By comparison to Pioneer's history of innovation in DJ hardware, rekordbox's performance function is a relatively recent addition to ATC's overall offering, having only been introduced in 2015. Before this, rekordbox was a simple music management tool, used to prepare USB drives for CDJs.

87. Serato is of the view that ATC developed rekordbox as part of a "build/buy" play to reduce the need for its hardware customers to also deal with DJ software providers. ATC is not the only hardware supplier to have done so, with inMusic having developed EngineDJ and Hercules having developed DJUCED to reduce the need for their hardware customers to use other providers' software.

*rekordbox has [**redacted**]*

88. rekordbox has [**redacted**].

*[**Redacted**]*

89. Pioneer's track record for innovation in DJ hardware is [**redacted**]. Serato observes that, since rekordbox's (performance mode) launched in 2015, rekordbox has [**redacted**].[73] [**Redacted**]. The Statement of Issues suggests that ATC may be a driver of Serato's innovation, referring to [**redacted**].[74] However, that document has been misinterpreted:

    89.1 [**Redacted**].

    89.2 This position of [**redacted**].

90. The most significant innovations in DJ software since [**redacted**]. In particular:

    90.1 Traktor developed Stems in 2015.

    90.2 Algoriddim djay developed stem song separation in June 2020.

    90.3 Serato integrated Ableton Link in 2019**.**

    90.4 Algoriddim djay introduced Apple Music integration in 2024.

    90.5 Algoriddim djay introduced Apple Vision Pro support in 2024.

    90.6 VirtualDJ introduce Sandbox mode in 2013.

    90.7 VirtualDJ introduced live suggestions and genius DJ in 2015.

    90.8 VirtualDJ introduced DMX lighting control via a plugin in 2018

91. It is also useful to track the innovations introduced by Serato before and after the entry of rekordbox's music performance functionality, shown in Table 4 below. This information shows that the rate at which Serato releases material new versions of its software has remained fairly consistent at [**redacted**][75] since Serato's launch and was [**redacted**].

**Table 4: Serato DJ software updates [confidential]**

[**redacted**]

*[**Redacted**]*

92. Similarly, with regard to pricing, the pricing comparison set out in **Appendix A** shows that [**redacted**]. As can be seen, Serato and rekordbox follow different pricing structures and changes in pricing for one product do not appear to trigger changes in pricing for the other. Notably:

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73 [**Redacted**].
74 Statement of Issues at [54], citing [**redacted**].
75 [**Redacted**].

92.1 Serato initially only sold perpetual licences for Serato DJ Pro and engaged in a number of pricing experiments and promotions (both before and after the release of rekordbox DJ) from time to time to boost sales.

92.2 Soon after rekordbox launched in 2015, Serato introduced subscription pricing in 2016 to align with general trend toward SaaS pricing structures (which values reoccurring revenue over one-off sales). Serato has gradually increased the price of its perpetual licences [**redacted**], but subscription pricing has remained unchanged since its introduction.

92.3 Approximately 4 years after Serato introduced subscription pricing, rekordbox replaced its perpetual licencing with subscription pricing.

92.4 While rekordbox removed perpetual licences, Serato has retained its perpetual licences.

92.5 While rekordbox increased its subscription pricing in January 2023, Serato's pricing has remained the same.

92.6 Serato solely bills in US dollars, whereas rekordbox bills in US dollars and other currencies.

93. Further, the pricing information specified in **Appendix A** [**redacted**]. All of this evidence is contrary to the suggestion of close competition between Serato and rekordbox in the Statement of Issues.

94. In summary, in Serato's view, rekordbox has [**redacted**]. The presence of rekordbox has clearly altered the outcomes of Serato's competitive activities (by diverting potential Serato customers to rekordbox), [**redacted**].

*rekordbox's market share and emergence reflects ATC's success as a hardware provider and low barriers to entry*

95. None of this is intended to disparage rekordbox software. It is a credible alternative (as are other offerings) and, despite the difficulties in coming up with reliable market share estimates (discussed further below), ATC has no doubt been successful in growing rekordbox's market share from zero on release.

96. However, in Serato's view, this market position has [**redacted**]. More likely, it reflects rekordbox being a convenient "in-house" DJ software option for users of Pioneer hardware, reflecting the dynamic referred to earlier in this submission where new DJs will choose their hardware first and software second.

97. This view is consistent with the documents quoted at [53.1] of the SOI,[76] which [**redacted**]. The only inference that can actually be drawn from that quote about competition between Serato and rekordbox in the market more generally is actually that competition between Serato's [**redacted**] and rekordbox's [**redacted**] it is not especially close.[77]

98. From Serato's perspective, ATC has been able to achieve the levels of uptake that it has simply by allocating sufficient resources to the development and marketing of rekordbox to ensure it functions as a credible alternative. ATC is not uniquely placed to execute this strategy. As discussed further from paragraph [103] below, there are a large number of well-resourced industry players (including, but not limited to, other hardware suppliers who can also offer software "in-box" with hardware) able to undertake a similar exercise at any time. This reality constrains Serato now and will continue to do post-merger.

*Serato and rekordbox have different customer bases and target markets*

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[76] [**Redacted**].

[77] The quote from [**redacted**] refers to [**redacted**].

99. In addition, the customer bases and target markets of Serato and rekordbox are quite different. In particular:

    99.1 Serato has established its presence primarily in [**redacted**].[78] Serato competes closely with [**redacted**] for this audience. On the other hand, rekordbox has stronger brand recognition in [**redacted**].

    99.2 Many rekordbox users are attracted to its feature that allows users to organise playlists, tracks, and export music to USB flash drives for use with CDJs or other ATC-embedded hardware, a functionality Serato does not provide.

*In any case, competition between rekordbox and Serato will continue following the acquisition*

100. In any case, although Serato does not consider it necessary to rely on this point, the earnout mechanism in the SPA (explained in **Appendix B**) inherently supports the continuation of competition between Serato and rekordbox post-acquisition.

101. As explained in **Appendix B**, the Sellers are entitled to [**redacted**] earnout payments which (broadly) are calculated based on Serato's [**relevant profit metric**]. Therefore, Serato's management team, who are among the Sellers eligible for earnout payments, have a strong financial incentive to boost Serato's sales to maximise these payments. [**redacted**].

102. While the Seller Protections in the SPA require ATC to act in good faith and ensure that all reasonable endeavours are used to ensure that Serato is operated in a manner that maximises [**relevant profit metric**], this does not prevent ATC from continuing to operate rekordbox. Indeed, ATC is financially motivated to enhance rekordbox's sales and MAUs, thereby minimising its financial obligations under the earnout arrangement. Should ATC decide to scale down rekordbox's operations and direct its user base towards Serato, potentially converting them into paying Serato customers during the earnout period, it would inadvertently increase the earnout payments ATC owes under the SPA. [**Redacted**].

**The strong competition from other providers will continue to constrain Serato**

103. A broad range of DJ software providers including Virtual DJ, Traktor, Engine DJ, Algoriddim's djay, Mixxx and DJUCED (among others) all offer a compelling alternative to Serato and rekordbox, and will continue to constrain Serato and the merged entity following the proposed acquisition.[79]

104. First, as a general point and as previously discussed, Serato submits that Statement of Issues significantly underplays the constraint posed by apps. As already discussed in Section A, the Statement of Issues mischaracterises apps as having limited functionality and only for beginners. The Statement of Issues also wrongly dismisses the evidence of their innovation contributions as limited, when in reality, the most significant developments in DJ software (stems and integration with music streaming services) in an otherwise largely homogenous product offering have been driven by apps.[80] As the newest players in the market, it is unrealistic to expect that apps would have provided the same number of innovation contributions as older players. What is important is the trend of the constraint they are providing, which is already strong and increasing.

105. Second, the constraint Serato faces from individual competitors has been understated. **Appendix C** compares Serato against VirtualDJ, djay Pro, Traktor Pro, and Denon Engine DJ in terms of features (including features targeted at professionals and advanced users) and examples of innovation, general usability, music integrations, and hardware compatibility. Serato wishes to draw the Commission's

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78 [**Redacted**].

79 To the extent that (a) EngineDJ and (b) DJUCED are currently locked to (a) Denon and Numark and (b) Hercules hardware, this could change in the future. [**Redacted**]. Until then, they remain strong constraints in relation to the users of the hardware they support.

80 Statement of Issues at [26].

attention to the following examples of the strength of the competitive constraint that those parties provide:[81]

105.1 VirtualDJ was one of the first DJ software providers to integrate with music streaming services. Other significant innovations driven by VirtualDJ include karaoke formats, intelligent automix, skins, and beatgrid FX. It claims to be the "most downloaded DJ software globally". It is capable of reading a user's Serato library, including carrying over any metadata.

105.2 TraktorPro is particularly well renowned for its suitability in demanding professional performance scenarios, such as clubs oriented towards dance/EDM music. This reflects its reliability and superior sound quality. It was primarily developed for optimal performance with Native Instruments' hardware. [**Redacted**],[82] but it remains able to support a wide range of DJ controllers through MIDI mapping functionality.

105.3 Denon's EngineDJ offers the one of the most comprehensive integrations with third party music libraries and music streaming services in the industry (comparable to the integration offered by Algoriddim's djay). As previously discussed, integration with music streaming services and libraries are becoming increasingly important as the way that consumers listen to music changes. It was the industry's first embedded DJ software offering to incorporate stems. It integrates with a growing range of Denon and Numark standalone DJ hardware which caters to a broad array of needs and budgets. For example, the Numark Mixstream range is available at entry level prices.[83]

105.4 The functionality of Algoriddim's djay Pro mobile app and desktop application exceeds that of Serato and rekordbox. djay Pro is integrated with Apple Music, a leading music streaming service, as well as the Apple Music cloud for personal libraries.[84] It was also the first DJ software offering to integrate with Spotify. It is capable of reading a user's Serato library, including carrying over any metadata. It pioneered stems technology and used the open source library Spleeter to be the first to launch stems functionality to market. It subsequently partnered with AudioShake to embed AudioShake's source separation into djay Pro5, offering more advanced functionality. Other features include Automix mode, a feature which is [**redacted**] (suggesting it is another influential innovation). In addition, djay Pro appears to have a close commercial relationship with Reloop and Apple, based on its integration with a range of Reloop products and Apple Music.

105.5 Mixxx is a free and open-source DJ software developed by the community. It is known for its stability and the wide range of features it offers at zero cost to the user. It supports multiple audio formats, real-time effects, cues, looping, sampling, beatmatching, automatic tempo adjustment, recording, and playback of DJ sets. Mixxx has a user-friendly interface suitable for beginners and advanced features for experienced DJs. It is compatible with various DJ controllers through plug-n-play mappings, plus has additional MIDI and HID functionality for additional hardware support.

105.6 DJuced is DJ software designed and developed by the hardware company Hercules. It features an intuitive interface and the same powerful features found in other top software, including cues, loops, samples, FX, and stems. It is compatible with Hercules branded DJ controllers but with the addition of MIDI mapping could be extended to a wider range of hardware. [**Redacted**].

106. Serato submits that the constraint from these providers is strong, and sufficient to prevent a substantial lessening of competition due to unilateral effects. As discussed further below, the Statement of Issues' use of market share figures as a proxy for market share is unreliable and would

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81 The following list uses the order in [71] of the Statement of Issues, rather than reflecting Serato's view of the strength of each individual competitor.

82 Statement of Issues at **[redacted]**.

83 https://www.numark.com/mixstream-pro

84 See **Appendix C** for further details of other streaming providers that are integrated into Algoriddim's djay.

understate the constraint from other DJ software providers. Notably, most DJ software providers offer users a similar interface, and there is a trend towards introducing technology to make it easier for users to import their music libraries (including metadata such as cue points) from other offerings such as Serato's. These are characteristics that would facilitate switching by users.

107. Serato is separately providing the Commission with screenshots showing the similarities between the interfaces of different DJ software products.[85] However, as an example, a comparison of the Serato DJ skin and a series of Virtual DJ skins, including a community-built skin designed to mimic the Serato DJ skin, and the interfaces for djay Pro, rekordbox, DJUCED and Traktor Pro is set out in **Appendix D.**

108. Finally, the Statement of Issues suggests that evidence from "hardware providers … indicated that Serato's DJ software is the most important software to integrate their hardware products with".[86] Serato may well be the market-leading software provider at present. That would naturally lead to hardware providers ranking Serato's as the "most important to integrate their hardware products with". However, Serato submits that this says nothing about the strength of the competitive constraint that other DJ software providers place on Serato.

*MAU is a better measure of market share than revenue*

109. Serato also disagrees with the use of revenue figures in the Statement of Issues to assess market share and the suggestion that revenue figures provide a more reliable estimate of market share than MAUs.[87] This stance is supported by several key considerations, underscoring the multifaceted nature of software monetisation and market dynamics:

    109.1 The growth strategy for software platforms frequently prioritises user base expansion over immediate revenue generation. Many companies aim to amass a broad audience of free or low-paying users, intending to monetise this base through alternative channels later (for example, by later offering a higher tier of the software which the user can subscribe for). Further, this approach might include leveraging user data, selling advertising space, or implementing premium service tiers. Consequently, revenue figures may not fully capture the value or success of a software product, as they can exclude significant sources of indirect income.

    109.2 Manufacturers frequently bundle fully functional software with their hardware products at no extra charge to enhance the overall offering. Examples include Hercules, which bundles DJuced, and Native Instruments, which includes Traktor with its hardware. This bundled software, though free, plays an essential role in the hardware's market appeal and forms a significant part of the "price-product-service package". Accordingly, it is inaccurate to attribute zero revenue value to this software, as it is a necessary component of the hardware package consumers purchase.

    109.3 Serato's revenue includes hardware fees Serato receives from "plug and play" licences included with hardware. However, most hardware supports multiple other DJ software products and many customers would choose to use non-Serato software.[88] For example:

        (a) Serato receives a royalty of [**redacted**] for every sale of a DDJ-FLX4, which includes a licence for Serato DJ Lite. However, that hardware also supports VirtualDJ, Algoriddim's djay, rekordbox and Mixxx.

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85 They were unable to be included within this submission due to file size.

86 Statement of Issues at [71.2].

87 Statement of Issues at [59].

88 Serato assumes that some other software providers' revenue figures may also present similar complications if used as a proxy for market share. Some software options would be paid for under similar royalty arrangements (i.e. the software provider is paid regardless of whether a user actually chooses to use their software), while other software options would be mapped to the hardware but only generate revenue if the user decides to purchase a license or subscription for the software directly from the software provider.

(b) Serato receives [**redacted**] for every DJM-S9 mixer sold, which includes a plug-and-play licence for Serato DJ Pro. However, that hardware also supports VirtualDJ, Algoriddim's djay and rekordbox.

The collection of these hardware fees does not guarantee that the end user will use Serato with the associated hardware. [**redacted**]. Consequently, linking such revenue directly to Serato's market share is inaccurate, as it does not necessarily reflect actual usage of Serato's software by end users.

110. In light of the above factors, Serato has concerns regarding the revenue market share data used in Table 2 of the Statement of Issues. Notably:

110.1 [**Redacted**].

110.2 [**Redacted**]:

(a) [**Redacted**]

(b) [**Redacted**]

[**Redacted**]

110.3 [**Redacted**].

111. It is not clear whether the process of converting revenue figures into market share estimates has, or could reliably, take into account the complexities of the different ways in which software is monetised. [**Redacted**]. Serato therefore submits that revenue figures are an unreliable and inappropriate proxy for the number of users actually using any given product, and MAU is a better indicator of market share (although still subject to its own limitations and needing to be treated with caution).

*Music production software will also continue to provide a constraint*

112. As discussed in Section A at paragraphs [59]-[62], music production software is a viable option for a competitively significant proportion of DJs. In addition to the DJ software providers discussed above, other providers of music production software will also continue to constrain the merged entity post-acquisition.

**Barriers to entry and expansion are low**

113. The Statement of Issues suggests that entry by new competitors or expansion by existing competitors is unlikely to be sufficient in extent or sufficiently timely to constrain the merged entity and prevent a substantial lessening of competition.[89] In doing so, it refers to long lead times and high sunk costs for software development, and customer stickiness Serato submits that the barriers to entry and expansion are instead relatively low.

*The time and cost associated with entry and expansion has been overstated*

114. In response to the views in the Statement of Issues regarding the time required and cost of developing a new DJ software product de novo,[90] Serato refers to the report from Clear Point.

115. In response to the views in the Statement of Issues requiring the ongoing cost of investment, the suggestion that it would be necessary to invest in R&D "at a similar level" to Serato's R&D spend of [**redacted**] in order to offer a comparable product[91] overstates the level of investment actually

89 Statement of Issues at [84].
90 Statement of Issues at [85] and [86].
91 Statement of Issues at [86] and footnote 95.

required. The [**redacted**] Serato spent on R&D in the 2022 financial year included R&D across Serato's entire business, including music production software, supplementary products and technical debt requirements. Serato has reviewed its R&D spend for the current year and estimates that only about [**redacted**]% of Serato's current, business-wide R&D spend would be required to fund ongoing R&D in a DJ software product after its initial development phase is complete.

116. Serato submits that its existing rivals are well-placed to expand in a timely manner. An existing provider does not need to develop a completely new offering in order to expand. As indicated to the Commission by market participants, "software develops over time and new iterations of software are built upon previous iterations".[92] The Statement of Issues appears to suggest that this is reflective of a barrier to entry, but Serato submits that it instead reflects the potential for incremental expansion without the need for high sunk investment.

117. Expansion of this type could occur as the result of an existing rival expending their own resources to further develop their existing offerings, or by partnering with others to leverage existing technology and software available elsewhere. For example, Algoriddim improved stems for djay Pro by partnering with an independent company, AudioShake. Serato understands that Algoriddim was able to license software elements from AudioShake, reducing the cost of and time for expanding its offering.

118. ATC's experience with rekordbox provides an example of suppliers present elsewhere in the industry being able to readily expand on a larger scale by using their existing product as a route to market and to reduce the barriers to entry. As previously explained, Serato is of the view that rekordbox's success does not have anything to do with it being a superior product. Instead, ATC was able to invest in marketing to leverage its existing strengths into a customer base for its DJ software product and overcome any customer stickiness.

*Effective strategies are available to overcome customer stickiness and facilitate switching*

119. A further strategy to overcome customer stickiness (which, as discussed below, is a problem that has been overstated) available to rival DJ software providers seeking to enter and expand, and which they have already implemented with success, is by developing products that have a familiar look and feel to existing products in the market. As examples, again, rekordbox is a prime example of the success of such a strategy. A skin is also available for VirtualDJ which mimics the look and feel of Serato.

120. Finally, the trend towards cloud-based music libraries is improving the ease with which users can switch between different DJ software products. The use of music streaming services which are integrated into software providers lowers barriers to switching, by allowing users to carry over any organisation of their music libraries from their music streaming service of choice to their DJ software of choice. Importantly, DJ software providers are also increasingly building functionality into their products which allow music libraries to be imported from rival products such as Serato's, including by carrying over metadata associated with music preparation. This functionality is already available through Algoriddim, EngineDJ and VirtualDJ products.

121. In other words, rival DJ software providers have actively been developing functionality that makes it easier for users, including Serato users, to switch to their products.

*Switching DJ software is more feasible than suggested*

122. The Statement of Issues presents feedback from market participants indicating reluctance among DJs to switch software providers, citing "huge inertia" within the DJ software market and a preference for sticking with familiar software to avoid performance risks.[93]

123. Serato challenges the notion that DJs are inherently resistant to switching. The Statement of Issues appears to frame consumer behaviour within a static market context, where price and quality remain

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92 Statement of Issues at [85].

93 Statement of Issues at [87].

unchanged across the board. This overlooks the dynamic nature of consumer decision-making and the potential for a change in price or quality to impact purchasing decisions.

124. A more relevant consideration would be how DJs might react to shifts in the market, such as an increase in the price of DJ software by the merged entity or a decline in the software's quality—either in absolute terms or relative to competitors. Under these conditions, there is compelling evidence to indicate that DJs are indeed willing and capable of switching to alternative software solutions. DJs are not as "sticky" as suggested, especially when faced with factors that materially affect the value proposition of their current choice.[94]

125. Section 2.1.1 of the NERA Report highlights several key factors that simplify the process of switching DJ software, specifically:

125.1 Hardware compatibility: The need to change hardware is not a barrier to switching DJ software. Most DJ equipment is designed to be compatible with multiple software products, thanks to universal MIDI/HID protocols. This means new software entrants can easily configure their products to work with existing hardware without needing agreements with hardware manufacturers.

125.2 Music library portability: DJs can usually transfer their existing music libraries to a new DJ software without losing their collections (including the metadata the DJ has added to their tracks, such as cue points and loops), eliminating a potential hurdle to switching. For example:

(a) Engine DJ states that it "offers the most comprehensive 3rd-party library import in the industry supporting rekordbox, Apple Music / iTunes, Serato DJ and TRAKTOR databases. Instantly import your music, playlists, hot cues and loops ready to use on Engine DJ OS hardware".[95]

(b) Virtual DJ supports third party software playlists from iTunes, Serato Crates, Traktor and rekordbox;[96]

(c) While not officially announced, Algoriddim djay does support Serato Creates.[97]

125.3 The uniformity of user interfaces: The functionality and layout of DJ software are broadly similar across the industry, reducing the learning curve when transitioning to a new program.

126. In addition to above, there are a number of third party software tools that can be used to convert music libraries so they work on different platforms, including Lexion,[98] DJ Conversion Utility,[99] and Mixo.[100] The existence of these products suggest that there is demand for products to assist with the transition between different DJ software products.

127. Further, the perceived risk of adopting a different DJ software has been overstated. DJs have the opportunity to familiarise themselves with new software in settings that do not involve live

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94 Some high profile switches include world champion DJ, DJ Angelo, switching from Serato to djay Pro (https://www.algoriddim.com/company#ambassadors) and DJ Craze switching from Traktor to Serato around 2019 (https://www.instagram.com/p/BsvW7IyFpK1/?igsh=MTZqMmQwMXB3NW14aQ==).

95 https://enginedj.com/software/enginedj-desktop

96 https://virtualdj.com/manuals/virtualdj/interface/database/playlists/index.html

97 See https://community.algoriddim.com/t/serato-crates-into-djay-4/16702 for Algoriddim's response to the following customer query: "*hey it seems Djay now have access of Serato library (crates) right into the djay library menu! could you tell us more about this feature as i haven't read anything about it in the release notes*".

98 https://lexicondj.com/manual/convert-library ("Lexicon is great at DJ library conversion with some of the most advanced supported tools like smart playlists, streaming tracks and more. You can convert your from Rekordbox, Traktor, VirtualDJ, Serato, Engine DJ or to any of these.")

99 https://atgr-production-team.sellfy.store/p/emuy/ ("The market leader when it comes to conversion tools for DJs")

100 https://www.mixo.dj/ ("Export your music to any DJ Software & retain all your custom meta data.")

performance, ensuring they are confident in its reliability and performance capabilities before using it in a professional context.

128. The factors outlined above contribute to low barriers to switching, supported by evidence of actual switching behaviour:

128.1 In the 2017/18 DJ Census, 23.26% of respondents reported that they used a Traktor software product but that has since dropped to 10.08% in 2024.

128.2 [**Redacted**]**.**

128.3 Serato's [**redacted**]. [**Redacted**].[101] However, Serato's analysis of [**redacted**], as illustrated below.

129. To analyse its churn, Serato took a snapshot of its users in 2022 to see how many of them continued to use Serato DJ in the two following years. In particular:

129.1 Table 5 below takes a snapshot of all unique users of Serato DJ Pro and Serato DJ Lite in 2022 and tracks the number of those unique users who used Serato DJ Pro and/or Serato DJ Lite in 2023 and 2024. This highlights the drop off in users that needs to be replaced by new users.

129.2 Table 6 below takes a snapshot of all new users who subscribed for Serato DJ Pro or Serato DJ Suite during 2022 and tracks the number of those users who used Serato DJ Pro or Serato DJ Lite in 2023 and 2024 (including paying users who churned from Serato DJ Pro or Suite but continued to use Serato DJ Lite). This shows the same trend that subscribing users fall away and need to be replaced by new subscribing users.

**Table 5: Analysis of [redacted [confidential]**

[**Redacted**]

**Table 6: Analysis of [redacted] [confidential]**

[**Redacted**]

130. Table 5 and Table 6 show that:

130.1 [**Redacted**].

130.2 [**Redacted**].

130.3 [**Redacted**].

**Conclusion on unilateral effects**

131. In summary, the Commission can be satisfied that the proposed acquisition would not substantially lessen competition due to unilateral effects in the DJ software market.

132. First, apps must be recognised as a strong constraint on other DJ software providers. This is not just Serato's view as a software provider. It is also being recognised by other players in the industry, such as the increasing number of DJs relying on apps for high profile competitions and performances and

[101] Statement of Issues at [**redacted**].

moves by other hardware suppliers to make their products more attractive than their rivals' to app users. With DJs and consumers more generally changing the way they listen to and work with music and the ever-increasing processing power of mobile devices, the strength of apps as a competitive constraint will only increase. This alone should be sufficient to satisfy the Commission that the proposed acquisition would not substantially lessen competition due to unilateral effects.

133. Second, other DJ software providers, including providers of laptop applications, will also serve to constrain the merged entity and supplement the growing constraint it will face from apps.

134. Finally, the earnout provisions and associated Seller Protections in the SPA will preserve competition between Serato and rekordbox.

## D. The proposed acquisition will not substantially lessen competition in the DJ hardware market due to vertical effects

135. The Commission is considering whether the proposed acquisition will increase the ability and/or incentive for the merged entity to foreclose competition in the DJ hardware market post-merger.

136. The Statement of Issues has identified that the merged entity could use the following mechanisms to foreclose it hardware rivals:

136.1 Total foreclosure – where the merged entity refuses to make Serato DJ compatible with non-ATC DJ hardware; or

136.2 Partial foreclosure – where the merged entity raises the licence fee charged to non-ATC hardware partners, or makes integration of Serato DJ with such hardware partners less effective.

137. It is undeniable that these foreclosure strategies, if implemented, would harm Serato's financial performance. A material portion of the addressable market (being current or future users of Serato who use non-ATC hardware) will no longer be able to use Serato DJ, which will negatively impact Serato's revenue. However, the theoretical economic justification for pursuing such foreclosure strategies is that enough foreclosed users of Serato will decide to switch to ATC hardware, so the merged entity receives a net gain as a result of implementing the foreclosure strategies.

138. Serato understands that ATC and NERA are making submissions explaining why the proposed acquisition will not substantially lessen competition in the DJ hardware market due to vertical effects. Serato wishes to supplement those submissions by making the following points about the legal and practical barriers that render the foreclosure strategies commercially untenable to the degree that there is no "real risk" that they will be pursued by the merged entity.

139. In summary:

139.1 First, the merged entity would lack the ability to foreclose rival hardware manufacturers:

(a) Serato lacks market power in the DJ software market and is not a "must have" software product, preventing the merged entity from being able to foreclose its rivals under any mechanism.

(b) ATC's legal obligations under the SPA[102] and Serato's legal obligations under its agreements with its hardware partners would prohibit the merged entity from taking the steps necessary to foreclose rival DJ hardware providers.

[102] **Appendix B** explains the relevant mechanisms in the SPA. Their impact on the merged entity's ability and incentives to foreclose its rivals are analysed in in this section.

(c) Any attempt to foreclose rival hardware manufacturers would take years to implement, giving its targets time to defeat it.

139.2 Second, the merged entity would lack the incentives to foreclose. First, compatibility with hardware is Serato's path to market. The Serato offering would be significantly weakened if it was not compatible with a wide range of hardware. Second, the inability of any means to execute a foreclosure strategy in a timely manner makes it unlikely the merged entity would pursue a foreclosure strategy at all. Third, the Seller Protections and earnout mechanism in the SPA will ensure that the merged entity will not have any incentives to foreclose its rivals in the hardware market. Fourth, attempting foreclosure would damage Serato's brand and the merged entity's wider business interests.

139.3 Third, any attempted foreclosure strategy could not realistically have the effect of substantially lessening competition. By the time an attempted foreclosure strategy could be implemented, the competitive landscape is likely to have continued to evolve so that Serato is even further from "must have" status than it is today.

**The merged entity would not have the ability to foreclose its rivals in the DJ hardware market**

*Serato is not a "must have"*

140. In order to foreclose its rivals, the merged entity would need market power for the supply of DJ software and a mechanism to foreclose. Serato submits that this would not be the case.

141. The vertical foreclosure strategies will only be viable if Serato DJ is an essential input that the merged entity's competitors in the DJ hardware market must have access to in order to effectively compete. The Statement of Issues describes Serato as an "important input"[103] and states that the "evidence suggests that Serato is viewed as an essential trading partner by ATC's main rivals".[104]

142. However, Serato is not a "must have" without which DJ hardware manufacturers could not effectively sell their products, either in New Zealand or globally. In particular:

142.1 The merged entity would continue to be subject to considerable competitive constraint from its rivals in the DJ software market. This is for the reasons set out in Section C, which are not repeated here.

142.2 Serato's hardware partners already implement a strategy that ensures their products are compatible with a variety of DJ software, indicating broad support beyond a single software solution.

142.3 Trading data from Serato, previously submitted to the Commission in response to the Statement of Preliminary Issues but not acknowledged or referenced in the Statement of Issues, concretely demonstrates that Serato DJ is not a "must have". This is evidenced by the following:

(a) In the financial year ended 31 March 2018, 100% of the DJ controllers released that were "officially" Serato supported were marketed / promoted with Serato being the primary DJ software to be used with the DJ controller. That percentage has been rapidly declining on average each year. In the financial year ended 31 March 2024, only [**redacted**]% of such DJ controllers were marketed / promoted with Serato being the primary DJ software to be used with the DJ controller.

(b) Of the [**redacted**] new DJ hardware products supported by Serato in the last two financial years (FY23 and FY24):

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103 Statement of Issues at [8].
104 Statement of Issues at [97].

(i) all can be used with multiple DJ software products;

(ii) [**redacted**] are embedded devices, designed primarily to be used using the manufacturer's embedded software (i.e. without needing to be connected to a laptop without needing to be connected to a laptop with DJ software);

(iii) [**redacted**] have Serato marketed as the primary software option with other software also available;

(iv) [**redacted**] have Serato marketed as an available / secondary DJ software option along with others.

(c) In the financial year ended 31 March 2024, only [**redacted**]% of the new hardware officially supported by Serato bears Serato's branding.

(d) The hardware fee Serato has been able to negotiate with its hardware partners for hardware that has "plug and play" support for Serato DJ Pro has been steadily declining for the past 6 financial years.

(e) Serato's hardware partners have released hardware which was not officially supported by Serato at launch, with Serato support coming later.

(f) In recent years, many companies have successfully launched DJ hardware product with no Serato association.[105]

These indicators strongly refute the claim that Serato DJ is an essential input for its DJ hardware partners. On the contrary, they reflect a market rich in alternative DJ software options.

*Foreclosure is prohibited by the SPA*

143. Second, as previously submitted to the Commission, the obligations and Seller Protections in the SPA mean that ATC would not have the ability to legally instruct Serato to act in accordance with a foreclosure strategy.

144. The Statement of Issues raises concerns that these may not be sufficient protections, as "there are a number of ways ATC could act against the interests of rival hardware manufacturers, whilst still remaining in compliance with its obligations under the SPA". The Statement of Issues suggests that this could include:[106]

144.1 allowing rival hardware manufacturers to partner with Serato, but imposing internal resourcing decisions in terms of the time and cost for development and integration, so as to prioritise integration of Pioneer DJ hardware over rival hardware;

144.2 offering different variations of Serato software to different hardware manufacturers; and

144.3 tying or bundling products.[107]

145. The Statement of Issues is wrong to suggest that such conduct would not breach ATC's obligations under the SPA. Serato submits that such conduct would contravene the Seller Protections, and therefore be prevented by the terms of the SPA. Each of the foreclosure mechanisms identified in the Statement of Issues would adversely affect Serato's [**relevant profit metric**]**,** and the incentives to engage in them are therefore addressed by the SPA.

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105 For example, [**redacted**].
106 Statement of Issues at [99] and [106].
107 Statement of Issues at [99].

146. **Appendix B** provides a fulsome explanation of the earnout regime, the Seller Protections and why the foreclosure mechanisms identified in the Statement of Issues would be prohibited by the SPA.

*The Sellers are incentivised to monitor and enforce the Seller Protections*

147. The earnout makes up a material portion of the purchase price payable by ATC. [**Redacted**]. Consequently, the Sellers are greatly motivated to ensure that ATC adheres to the Seller Protections to ensure that Serato is managed in a way that optimises the potential earnout payment.

148. Engaging in strategies that cannibalise Serato's performance so that ATC may sell more hardware will not be tolerated, and the Sellers will be highly sensitive to any such conduct. As outlined in **Appendix B,** [**relevant profit metric**, **redacted**]. This arrangement will make the Sellers particularly vigilant against any activities that could even slightly harm Serato's [**relevant profit metric, redacted**].

149. The Sellers are also well placed to ensure that ATC complies with the Seller Protections for the following reasons:

149.1 Serato's c-suite executive and a number of other key employees are participants under Serato's employee share scheme and will be selling shares in Serato as part of the proposed acquisition. These key employees will receive a share of any earnout paid by ATC, so they are incentivised to ensure ATC complies with the Seller Protections. As such, a portion of the sellers will have "eyes" over Serato during the earnout period and will likely report any non-compliance to the other sellers.

149.2 As well as a portion of the Sellers making up part of Serato's senior management team, Steve West and AJ Wilderland (the Serato founders) will receive financial information every 6 months (being full and half year financial statements) regarding the performance of Serato and its subsidiaries. The Sellers will be closely comparing these financial statements against Serato's forecast to anticipate what the earnout may be. Any unforeseen downturn in Serato's performance would trigger immediate inquiries from the Sellers, ensuring a proactive approach to safeguarding their interests.

149.3 The Seller Protections are robust and enforceable, and not "'watered-down" protections that are difficult to prove or enforce. ATC has express obligations to use all reasonable endeavours support the growth of Serato with the view of maximising [**relevant profit metric**]. Further, Serato must be operated in a prudent manner consistent with the 12 months prior to completion. As such, ATC cannot take steps that adversely impact Serato's [**relevant profit metric**] and try to justify them as being commercially reasonable at an ATC group level. Any action by ATC that compromises Serato's [**relevant profit metric**] will have a litigation risk for ATC.

149.4 While some may speculate that the Sellers could hesitate to enforce Seller Protections due to the potential risks associated with litigation, including the time, cost, and uncertainty of success, Serato firmly dismisses this concern. Instead, ATC has much more to lose and is thus more likely to be wary of litigation risk. In particular, if ATC engages in actions that breach the Seller Protections, such behaviour might initially remain undisclosed to the public. Litigation risks exposing these actions, which could significantly damage ATC's reputation and goodwill. The public revelation of such breaches could have far-reaching negative implications for ATC.

150. The Statement of Issues suggests that the Sellers may be less incentivised to enforce the Seller Protections towards the end of the earnout period ending 31 December 2028. This assumption is fundamentally incorrect; the reality is precisely the opposite. As detailed in **Appendix B**, the [**redacted**]. Consequently, the Sellers maintain a vested interest in Serato's financial performance, especially during [**redacted**].

151. It is evident that the Sellers' motivation to uphold the Seller Protections will remain undiminished throughout the entire earnout period, from completion until 31 December 2028.

*Attempts to "cash out" the earnout to avoid the Seller Protections will likely render foreclosure unfeasible*

152. The Statement of Issues also suggests that the Sellers could agree to vary the SPA so as to allow the ATC to engage in the foreclosure strategies. This would likely take the form of ATC agreeing to settle the earnout by paying an advance payment so the Seller Protections will cease to apply.

153. Serato considers that such a strategy is highly unlikely. [**redacted**]. Therefore, for ATC to motivate the Sellers to "cash out" the earnout early—allowing ATC to implement the foreclosure strategies—ATC would need to propose an exceptionally compelling offer to the Sellers. However, it is difficult' to see how it be economically rational for ATC to make such an offer when the structure of the earnout is considered.

154. The fundamental principle of an earnout is to align interests, ensuring the Sellers will benefit if Serato financially performs well. Under this arrangement, the Sellers will receive a higher payment from ATC, and ATC will benefit from Serato's increased revenue, profitability and innovation, during and potentially beyond the earnout period. Of course, the success of Serato not only benefits the Sellers via the earnout but also enhances Serato's value as an asset for ATC. Prematurely settling the earnout would mean ATC will bear an immediate financial burden without receiving the benefit of Serato's improved financial performance. Cashing out the earnout to then pursue a foreclosure strategy that diminishes Serato's value in order to potentially boost ATC's hardware sales would result in a compounded loss for ATC: the cost of the earnout settlement and the erosion of Serato asset's value.

155. The Statement of Issues uses vertical arithmetic to suggest that the merged entity "may have an incentive".[108] Serato submits that, importantly, the vertical arithmetic model described in the Statement of Issues does not account for the significant costs associated with an early earnout settlement which would be required as a prerequisite for pursuing a foreclosure strategy. If, strictly hypothetically, the Sellers were to accept an offer of say US$[**redacted**][109] by ATC to settle the earnout early, the foreclosure strategy would need to recoup at least US$[**redacted**] to be deemed profitable. If the Commission seeks to rely on the vertical arithmetic discussed in the Statement of Issues to conclude whether there is a "real risk" that the merged entity will engage in foreclosure strategies, the vertical arithmetic must account for the cost of cashing out the earnout to free ATC from the Seller Protections. NERA has adapted its vertical arithmetic model to account for this cost, and provides revised estimates of the critical diversion ratio required to make foreclosure profitable.[110]

156. Counter to the above argument, one might argue that ATC could settle the earnout for a lower sum if Serato underperforms post-acquisition. For instance, if Serato's trading results falter [**redacted**], the Sellers might be inclined to accept a reduced amount to cashout the earnout. However, if Serato's performance declines during a period when ATC is subject to the Seller Protections, that would only seem to confirm that Serato is not a "must have" software product. If Serato is not a "must have" product, foreclosure is simply not possible.

*Foreclosure is prohibited under the hardware partner agreements*

157. In addition to the Seller Protections in the SPA, Serato is contractually prohibited from foreclosing its hardware partners during the term of the hardware agreements. In particular:

157.1 Serato is contractually required to [**redacted**]. [**redacted**]:

[**Redacted**]

[**Redacted**]. As such, the merged entity cannot selectively pick and choose which hardware partners it wishes to continue supporting, or not, as part of a broader foreclosure strategy.

108 Statement of Issues at [114].
109 [**Redacted**]
110 Refer to the submission to be filed by NERA regarding the Statement of Issues.

While the software remains a live product, it must continue to be maintained across all applicable hardware partners.

157.2 The contracts between Serato and its hardware partners also require Serato to engage with its hardware partners with respect to the parties' respective software and hardware updates, in order to ensure ongoing and future compatibility. By way of example, [**redacted**]:

[**Redacted**]

While this clause partly reflects the 'two way street' nature of ensuring compatibility between the hardware's firmware and Serato's software (i.e., [**redacted**]), it also clearly evidences that the merged entity could not simply foreclose its hardware partners as part of a broader strategy to foreclose DJ hardware rivals. In other words, Serato could not simply refuse to integrate, delay integration or integrate less effectively (such as only allowing certain features to work with a controller).

158. The terms of the Software and Trademark Licence Agreements Serato has with its top four hardware partners by revenue (after ATC) are as follows:

158.1 [**redacted**].

158.2 [**redacted**].

158.3 [**redacted**].

158.4 [**redacted**].

159. [**Redacted**], Serato has historically always extended contracts to enable the hardware partner to continue to sell any hardware officially supported under the otherwise expiring agreement (as Serato is currently doing for [**redacted**]). Serato expects this practice to continue after the proposed acquisition, especially during the earnout period where ATC must procure that Serato continue to operate in a manner consistent with prior practice during the 12 months prior to closing.

160. Consequently, given these existing licensing commitments, alongside the constraints imposed by the SPA, Serato is precluded from foreclosing the DJ hardware it presently supports for the duration of these agreements (including any extension that may be granted in accordance with current practice).

*A foreclosure strategy would take years to implement, rendering it ineffective*

161. Theoretically, the most direct foreclosure strategy that the merged entity could use to compel DJs to purchase ATC hardware would be to make Serato immediately incompatible with all non-ATC hardware, and not support any future non-ATC hardware. If such a strategy were possible, and ignoring the Seller Protections in the SPA and Serato's obligations under its partnership agreements with its hardware partners, Serato users with non-ATC hardware would be forced to either:

161.1 switch to alternative DJ software while keeping their non-ATC hardware; or

161.2 discard their non-ATC hardware in favour of purchasing ATC hardware to continue using Serato.

162. In such circumstances, where foreclosure can occur immediately, the vertical arithmetic model referred to in the Statement of Issues remained inconclusive as to whether such a strategy would be commercially rational. However, the foreclosure strategy will be materially hindered (to the degree that it would likely be ineffective) due to inability for the strategy to have an immediate impact. If the merged entity sought to implement a foreclosure strategy such as this, there would be a significant window of time during which non-ATC hardware would continue to be compatible with Serato DJ. The longer the period of time during which a user can defer the decision as to whether to forego Serato or

their non-ATC hardware, the much less likely it is that foreclosure would achieve the intended economic outcome.

163. The delay in being able to effectively foreclose is due to the download/install nature of Serato's software. Once Serato's software has been downloaded and installed on a computer, Serato cannot unilaterally update the software to render it incompatible with particular hardware. This is because the software resides locally on the user's computer. Serato DJ operates independently once installed, unlike, for example, a web-based application with consistent connection to the host server.

164. To implement a foreclosure strategy, Serato would need to release a new version of Serato DJ which was exclusively compatible with ATC hardware. That new version would need to be downloaded by the user, who could simply choose to not update to the new version. These users could continue to use older, more flexible versions of Serato software which would continue to work with all hardware products that are already compatible with these versions.

165. Accordingly, if the merged entity were to release a new version of Serato which is incompatible with non-ATC hardware, users of non-ATC hardware (which was previously supported by Serato) would still have the following options to use Serato DJ:

    165.1 continue to use the non-ATC hardware on the previous version of Serato DJ;

    165.2 purchase new non-ATC hardware (which was previously supported by Serato) and use it with the previous version of Serato DJ; or

    165.3 purchase new non-ATC hardware (released after the merged entity began implementing a foreclosure strategy, so is not Serato supported), connect it to a Serato-supported soundcard (such as a Reloop Flux). This would allow the user to use their new non-ATC hardware with the previous version of Serato that was compatible with the Serato-supported soundcard.[111]

166. Serato anticipates that users of non-ATC hardware would continue to use Serato DJ in this way for a material length of time for the following reasons:

    166.1 Generally, DJ hardware has a shelf life of 3 – 5 years before it is discontinued. That means that non-ATC hardware that is compatible with the previous version of Serato DJ will be available for purchase up to 5 years after the foreclosure strategy is implemented.

    166.2 Access to the previous version of Serato DJ will not be limited to those who had downloaded Serato DJ prior to the foreclosure strategy being implemented. Even if the prior version is removed from Serato's website, the installation files of the previous version will be on countless laptops around the world and can be freely distributed online.

    166.3 The functionality of DJ software is largely homogenous across all DJ software products, and the largely incremental nature of improvements in DJ software means many users are content with older versions, which already provide comprehensive functionality. This is already the case with Serato's users. The latest material update of Serato DJ Pro (version 3.1.0) was released on 4 December 2023. As at the end of February 2024, only [**redacted**]% of Serato DJ Pro users had the latest 3.1 version,[112] with [**redacted**]% using the previous 3.0 version,[113] [**redacted**]% on the version before that[114] and [**redacted**]% using even older versions. On that basis, if the merged entity attempted to implement the foreclosure strategy, Serato would likely face significant customer backlash and trigger high levels of

111 This assumes that the merged entity is also implementing its foreclosure strategy in relation to products such as the Reloop Flux.
112 Version 3.1.0 or 3.1.1.
113 Versions 3.0.0 – 3.0.12.
114 Versions 2.6.0 – 2.6.2.

resistance from users. This could be as simple as refusing to install updates, or include switching to other software.

166.4 It is unlikely that affected users of Serato DJ would later be compelled to purchase ATC hardware as a result of newer versions of Serato DJ having materially better features:

(a) DJ software tends to improve incrementally. It would have to be a very significant new feature (like stems) for a DJ to buy new hardware solely for the purpose of having access to that new feature. Significant features alone are unlikely to justify the expense of new hardware when other software options are available.

(b) If that new feature was significant enough to justify new hardware, it is likely that other DJ software providers would adopt that feature too. Therefore, for the purposes of accessing a feature, it seems far more likely that a DJ would simply switch software products rather than spending hundreds or thousands of dollars on new hardware.

167. Due to the reasons given above, a foreclosure strategy which relies on Serato being incompatible with non-ATC hardware would take a long time to implement. This delay would give rival hardware providers a window to protect themselves against a foreclosure strategy, as users would likely allow their existing hardware to run the course of its usual life rather than rushing to purchase ATC/Pioneer hardware. Their next hardware purchase may not be for a number of years.

168. The main, and most likely, strategy that would be available to a rival hardware provider to pursue in this window would likely be to progress their integration other DJ software offerings, including DJ apps.[115] This would provide the greatest protection against a foreclosure strategy. In this regard, as apps further develop their functionality and mobile device processing power continues to improve, apps are likely to become increasingly attractive options for DJs to use[116] and hardware providers to partner with. As previously discussed, the improvement of the other software offerings can effectively, and is likely to, happen incrementally.

169. Another option would be to develop their own software offering, similar to ATC's development of rekordbox. The Statement of Issues raises concerns that other software brands do not "have the same brand strength as Serato's DJ software", and "rekordbox might have been an attractive DJ software for DJ hardware providers to partner with but would not be an option under a foreclosure strategy." However, if they are willing to make the right investments in marketing and properly take advantage of their existing strengths and routes to market, hardware providers can play a key role in building the reputation of affiliated software options. Indeed, this is exactly how ATC made rekordbox "an attractive DJ software for DJ hardware providers to partner with".

170. In the worst case scenario, the merged entity's rival hardware manufacturers would have 10 years to build their relationships with other software providers or develop their own software offerings. This is on the basis of the five year duration of the Seller Protections and earnout mechanism in the SPA and 3-5 year lifespan of DJ hardware. Serato will be incentivised to ensure that it supports any hardware manufactured or sold towards end of the five year period to maximise its own sales and the value of the earnout (including by continuing to offer plug and play licences). Once that hardware has been manufactured, Serato will not be able to withdraw its support for the hardware for the reasons discussed above.

**The merged entity would not have the incentive to foreclose its rivals in the DJ hardware market**

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115 See **Appendix C** for details of rival software providers' current integrations with other hardware brands.

116 Even if the Commission continues to have concerns about the functionality available on apps today (which, for the reasons outlined in Section A, Serato submits would be misplaced), by the time a foreclosure strategy could theoretically be implemented apps would have developed their functionality even further.

171. Serato disagrees with the concern in the Statement of Issues that the merged entity would have the incentive to foreclose its rivals in the DJ hardware market.

*A foreclosure strategy would erode Serato's path to market*

172. First, a key part of Serato's success is its compatibility with a wide range of hardware. This broad compatibility gives Serato a path to market (as reflected in [**redacted**]). A key selling point for Serato, particularly for professional DJs, is its broad compatibility with a wide range of hardware. This allows a DJ to show up to a club with confidence that they can perform using Serato, regardless of the hardware available at a given club. The drive to offer broad compatibility is the rationale behind Serato's approach of supporting club kit devices for free, continuing to offer plug-n-play licences, and not forcing log-ons when offline.

173. If Serato were to limit that compatibility, this would significantly reduce its reach and generate significant customer backlash. If DJs could not be confident that they could use Serato with the hardware available at any given club, they would likely seek alternative software that is more broadly compatible.

*A foreclosure strategy would be too risky to try*

174. Second, the ability of rival hardware providers to circumvent a foreclosure strategy means pursing one would be highly risky. Importantly, as discussed above, the 3-5 year life cycle of DJ hardware and the need for Serato users to actively download and install software updates means any foreclosure strategy would take a long time to implement and carry a high risk of defeat from two different directions (the merged entity's rivals and Serato users).

*The SPA places strong incentives on Serato to maximise its sales and resist any potential foreclosure strategy, and increases the costs of a foreclosure strategy*

175. Third, the earnout mechanism in the SPA is designed to ensure that Serato management has strong incentives to maximise the sales of Serato in the market, without reference to ATC's hardware sales. This means that Serato management will be disinterested in any strategy that might limit the number of DJs that might be available to purchase a Serato subscription, including a foreclosure strategy that limits Serato to selling to users of ATC/Pioneer hardware. They, along with the other selling shareholders, will be strongly incentivised to enforce the protections in the SPA to enable this to occur, and to push back against any attempt to circumvent them. Each of the potential foreclosure mechanisms identified in the Statement of Issues would impact Serato's [**relevant profit metric**], reducing the earnout payable to Serato's management – ensuring that Serato's management has strong incentives to refuse to implement any foreclosure strategy:

    175.1 Refusing to do business with a hardware manufacturer, or imposing terms that results in a hardware manufacturer decreasing its level of business with Serato or refusing to do business with Serato, will negatively impact Serato as (A) it will no longer receive any hardware fees from the hardware partner, and (B) Serato will be compatible with less hardware. This would result in customers ceasing to use Serato, or remove the opportunity for new customers to use Serato with the hardware in question.

    175.2 [**Redacted**]. Any attempt to increase license fees would likely result in Serato's hardware partners reducing the amount of hardware that they sell with Serato or terminating their partnering arrangements with Serato, which would reduce [**relevant profit metric**].

176. Conversely, ATC would be incentivised to continue operating rekordbox in order to reduce its financial exposure under the earnout provisions. This means that the suggestion in the Statement of Issues

that rekordbox "would not be an option under a foreclosure strategy"[117] is inconsistent with ATC's incentives (as explained in paragraphs [100]-[102] above).

177. Serato's management would be strongly incentivised to enforce the Seller Protections in the SPA. Those incentives are explained further in **Appendix B**, but in summary, those protections are what will allow Serato to deliver on the outcomes that would trigger the earnout. "Unagreeing" the Seller Protections would require ATC to "buy out" the protections at significant cost. This would need to be incorporated into the minimum amount that ATC would need to be able to guarantee it could recover if it tried execute a foreclosure strategy. These points are covered in more detail in paragraphs [153]-[155] above.

178. The vertical arithmetic discussed in the Statement of Issues does not account for this cost. If, hypothetically, ATC were to disburse $[**redacted**] to settle the earnout early, the foreclosure strategy would need to recoup at least $[**redacted**] to be deemed profitable. Assuming that an amount as high as this could be recovered is (as demonstrated by NERA's updated model) simply far too risky and not realistic, in a context where a foreclosure strategy would be delayed in its execution and there is ongoing availability of low-effort workarounds.

179. If ATC could settle the earnout for a lower sum as a result of Serato underperforming post-acquisition, assuming ATC has been held to the Seller Protections, that would suggest that Serato is not a "must have" software product. In such a scenario, foreclosure would not be possible.

180. The Seller Protections and earnout mechanism in the SPA therefore effectively remove any incentives for the merged entity to foreclose its rivals in the hardware market.

*A foreclosure strategy would damage Serato's brand and the merged entity's wider business interests*

181. Fourth, Serato understands that ATC's rationale for the proposed acquisition is part of a broader strategy to expand its presence in the significantly larger music production industry (with Serato's music production software complementing ATC music production hardware development).

182. The music production hardware and software industry is very similar to the DJ hardware and software industry in that there is wide compatibility between all hardware and software products due to the universally adopted MIDI and HID protocols. Presently, both Serato and ATC hold a relatively modest presence within the music production market. Any ambitious plan for growth necessitates ensuring that the merged entity's offerings are compatible with an extensive array of competitive products.

183. Implementing a foreclosure strategy concerning DJ software and hardware would highly likely tarnish the reputation of the merged entity, affecting not just the DJ market but potentially souring the entity's standing within the music production sector as well. Serato anticipates a significant backlash within the DJ community against any foreclosure strategies by ATC and Serato, potent enough that DJs might consciously choose alternative products as a form of protest against the merged entity. This adverse reputational impact is expected to spill over into the music production domain, where users might harbour scepticism towards the merged entity's products, fearing the application of similar foreclosure strategies. Given that DJs often venture into music production, making them a key demographic for music production software, it would be counterproductive for the merged entity to alienate customers in the DJ market, especially since they represent a significant target audience for their music production offerings.

**No substantial lessening of competition as Serato will be even less likely to be a "must have" after the earnout period**

[117] Statement of Issues at [122.2].

184. The DJ industry is dynamic and constantly changing in response to both external innovations and innovations by market participants. Serato expects that the next 5 years will also see significant change.

185. The rate of change is illustrated by the number of changes that have occurred in the DJ industry since the SPA for the proposed acquisition was signed on 11 July 2023. Since that date:

185.1 Reloop has launched a 4 channel mixer primarily for Algoriddim djay (signifying a possible new commercial relationship between Reloop and Algoriddim djay);[118]

185.2 Algoriddim djay has launched its integration with Apple Music (Apple's music streaming platform)[119] and released compatibility with Apple Vision Pro (which allows users to DJ with virtual DJ hardware);[120]

185.3 Engine DJ 3.4 was released, which includes Bluetooth audio in (where a mobile device can be connected to embedded hardware via Bluetooth and the audio from the mobile device can be used as the audio input for the hardware);[121]

185.4 Traktor won best DJ production technology at the 2024 NAMM TEC Awards;[122]

185.5 Mixxx released the latest version of its DJ software which includes support for Apple Silicon (which Serato is yet to achieve);[123]

185.6 Algoriddim djay launched its improved stems feature;[124]

185.7 Rekordbox iOS released Beatport support;[125]

185.8 Denon released DMX lighting support for the Prime 4+;[126]

185.9 Serato released version 3.1 of Serato DJ Pro, which includes stem control support for 18 additional pieces of hardware;[127] and

185.10 [**Redacted**].

186. For the reasons previously outlined, Serato does not consider its software to be a "must have" product today. Serato's products are likely to be even further from a "must have" product after the earn out period ends on 31 December 2028 as:

186.1 as discussed in Section A, the mobile DJ apps already provide a strong constraint. As new generations of DJs with a preference for mobile devices continue to come through, the already important role that mobile DJ apps play can only increase;

186.2 the popularity of embedded DJ hardware, such as CDJs and all-in-ones, is likely to increase. This will reduce the demand for standalone DJ software that is compatible with specific hardware;

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118 https://www.reloop.com/reloop-rmx-95
119 https://www.algoriddim.com/news/449-apple-music-integration-is-here-
120 https://www.algoriddim.com/djay-vision
121 https://enginedj.com/news/articles/engine-dj-v3-4-0-now-available-bluetooth-audio-in-and-keyboard-support
122 https://www.namm.org/thenammshow/awards/tec-awards-2024
123 https://mixxx.org/news/2024-02-16-mixxx-2-4-0-features/
124 https://www.algoriddim.com/press_releases/447-algoriddim-unveils-djay-pro-5-with-next-generation-neural-mix-crossfader-fusion-and-fluid-beatgrid-
125 https://rekordbox.com/en/2024/03/rekordbox-for-ios-supports-beatport-streaming/
126 https://www.instagram.com/p/Cxx-ke3IbGR/
127 https://www.instagram.com/p/Cxx-ke3IbGR/

186.3 the cost of embedded DJ hardware may start to decrease as hardware advances, resulting in:

(a) more consumers opting for embedded DJ hardware over the generally cheaper DJ controller; and

(b) DJ manufacturers focussing on the development of embedded hardware if the price difference between that and DJ controllers becomes less material;

186.4 rival hardware manufacturers will likely release their own DJ software product (which is evidenced by the fact that [**redacted**]) and, as shown in ClearPoint's report, this can be achieved in 12-18 months;

186.5 the boundaries between DJing, music production, and live performance are increasingly blurring. Software that integrates these aspects effectively could gain popularity, shifting demand away from traditional DJ software toward more comprehensive music creation and performance platforms;

186.6 artificial intelligence and machine learning could revolutionise the DJ software industry by offering features like automatic track matching, mood-based playlist creation, and real-time music generation tailored to audience response. This could change the skill set required to be a DJ and impact the features that are most valued in DJ software; and

186.7 further developments in the DJ industry are likely to occur that are currently not anticipated given the pace that new software products and innovations are developed and released. For example, [**redacted**].

187. In conclusion, Serato submits that the industry's future will continue to be shaped by innovations and shifts that are difficult to anticipate with precision today. However, even those that are already evident (such as the increasing strength of mobile DJ apps as competitors) mean that by the time the earnout mechanism and Seller Protections expire, Serato is likely to be even further from a "must have" product than it is today.

**Conclusion on vertical effects in the DJ hardware market**

188. In conclusion, the merged entity would have neither the ability nor the incentive to foreclose its rivals, and no ability to guarantee its success. A foreclosure strategy would be rife with implementation and legal risks and high implementation costs, derived from the practical realities of how DJ software and DJ hardware work as well as the earnout mechanism and Seller Protections in the SPA. It is extremely unlikely that a foreclosure strategy would have a sufficient prospect of success for it to justify the risks and expense of attempting one.

## E. The proposed acquisition will not substantially lessen competition in the DJ software market due to vertical effects

189. Serato agrees that the proposed acquisition is unlikely to raise concerns that the merged entity would have the ability and incentive to foreclose its rivals in the DJ software market.

190. The Statement of Issues posits that foreclosure of rival DJ software providers may nevertheless be rational as part of a strategy to foreclose rival DJ hardware providers. Serato is not entirely clear about how this concern operates, as it seems to require foreclosing market A, in order to foreclose market B, in order to foreclose market A – which appears somewhat circular in nature. However, Serato understands that this theory of harm is based on ATC's high market share and strong brand recognition, which the Statement of Issues suggests may be indicative of ATC having market power in the supply of DJ hardware.[128] The Statement of Issues also points to a high fixed and sunk cost in developing software as a factor which the merged entity could use to prevent rival DJ hardware

[128] Statement of Issues at [132]. Serato notes that ATC is currently rebranding the Pioneer DJ brand to ATC. [**Redacted**].

providers from partnering with another DJ software provider or forming a vertically integrated hardware-software company to defeat a foreclosure strategy. For example, the merged entity could refuse to allow its hardware to be interoperated with the software of rivals so that rival DJ software providers cannot reach scale to become a viable competitor.[129]

191. Serato refers to ATC's submissions on this theory of harm. In addition, Serato submits that this theory of harm seems to assume that existing rival DJ software providers need to grow before they become viable partners for rival hardware providers. This is simply not the case.

191.1 There is no suggestion in the Statement of Issues that Serato's existing competitors are not viable competitors.

191.2 The opposite is true: software providers already take steps specifically aimed at improving their ease of use with a range of different hardware products, whether or not a hardware manufacturer has chosen to pursue an "official" relationship with the software provider.[130] For example, VirtualDJ markets an "intuitive mapper interface and midi-learn capability for customization and tweaks, as well as creation of your own mappers. And with a powerful scripting language, almost every facet of the software can be controlled and mapped." The DJ controllers officially supported by Algoriddim djay Pro for iOS include 23 Pioneer DJ controllers, 26 Numark controllers, 12 Reloop controllers, 11 Denon controllers, ten Hercules controllers, six Rane controllers, two Allen & Heath controllers, and two Native Instruments controllers.

191.3 It is unlikely that currently viable software providers could be pushed below viable scale before they have had the opportunity to deepen their relationships and integrations with other hardware producers if required, particularly given the time lag that would be involved in any foreclosure strategy.

192. Finally, this concern seems to implicitly place undue weight on statements from hardware providers that Serato is the "most important" software to integrate with.[131] If faced with a realistic threat of foreclosure, those hardware providers would of course seek to work with other software providers.

## F. The proposed acquisition will not substantially lessen competition due to ATC gaining access to the sensitive information of its rivals

193. Serato disagrees with the concern in the Statement of Issues that the proposed acquisition could substantially lessen competition by giving ATC access to its rivals' sensitive information. There will be sufficient protections available for rivals' planned innovations and customer information to protect rivals' incentives to compete, and to protect against the risk of coordination.

194. In order to address this concern, Serato first seeks to clarify the types of information to which it requires access in order to facilitate integrations with DJ hardware. It is then possible to understand the range of protections that will be available to protect the sensitive information of any rival DJ hardware suppliers who may seek to work with Serato following the proposed acquisition.

**Serato only requires limited information in order to facilitate integrations with DJ hardware**

195. The information that a hardware provider might share with Serato before launching new hardware varies depending on the level of collaboration sought. Some hardware providers have chosen to share more information with Serato than others. However, when it comes down to it, prior to launch, hardware providers need only share with Serato what they are comfortable with – if anything at all.

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129 Statement of Issues at [134].

130 See **Appendix C** for further examples of support that DJ software providers have developed for non-ATC/Pioneer hardware Products.

131 Statement of Issues at [71].

*DJ hardware suppliers seek different levels of collaboration with Serato*

196. Hardware suppliers have different views on the value of actively involving Serato in hardware development prior to the hardware's launch. The extent of Serato's involvement has fallen across a spectrum from full collaboration through to no involvement at all. For example:

196.1 Serato had no prior involvement at all with the development of [**redacted** ][132] (among others).

196.2 Serato had some prior involvement with the development of [**redacted**].

196.3 The development of [**redacted**] involved full collaboration with Serato.

197. Serato's preference has been to ensure that it has at least some involvement with hardware development prior to launch. This approach allows Serato at a minimum to ensure that its software works well on new hardware from day 1 at launch. Otherwise, Serato has to retrofit its software to the newly launched hardware as soon as possible after launch to ensure Serato software works smoothly with the newly launched hardware without user input.

198. However, Serato is largely indifferent as to whether there is collaboration with the hardware provider over and above this minimum level. Broadly, if a hardware provider prefers full collaboration, Serato is happy to engage in that way. The main commercial advantage for both the hardware provider and Serato of full collaboration is that this gives Serato the opportunity to influence design choices in a way that improves the quality of the hardware ultimately launched.

199. Serato only sometimes provides input of the type sought in "full collaborations", and there is nothing that makes Serato any better positioned to provide this input than anybody else in the DJ industry. This is reflected in some hardware providers' choices not to seek full collaboration with Serato. Other parties who can provide this kind of input include contract product designers, design agencies, and customer research specialists.

200. On occasion, DJ hardware suppliers partnering with Serato have requested that Serato implement new Serato DJ software features for use with their hardware offering. The specifications of such features need to be discussed with Serato. While there may sometimes be a time limited period where the feature is exclusive to a particular hardware supplier before it is mapped to other hardware, the availability of the feature will never remain exclusive to the hardware provider who requested it and the IP for how to implement the feature belongs to Serato. Ideas for new features are abundant, and many features are never implemented.

*Serato only requires limited information for active involvement in the hardware development process*

201. For any hardware provider that prefers that Serato be actively involved in the development of its new hardware, the minimum level of sensitive information that would need to be shared with Serato prior to launch is:

201.1 Technical specifications: specification of the required technical components for Serato DJ to communicate with the hardware, such as the Product ID;

201.2 MIDI specification: specification of the MIDI messages used by Serato DJ to communicate with the hardware;

201.3 Prototype hardware: the first prototype of the hardware for development and testing purposes; and

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[132] At the time of making this submission, Serato is continuing to work on support for [**redacted**].

201.4 Release candidate hardware: the intended final release version of the hardware.

202. Of these categories, the only truly sensitive information that needs to be shared is the prototype hardware. This could be delivered to Serato as late as two months before the hardware's go-live date. Serato does not need access to the internal construction details of the hardware, its internal components, or the firmware source code.

203. Hardware providers seeking full collaboration with Serato have also shared information such as the concept image, layout design and silk screen (a diagram of the printed information on the outside of the hardware showing how buttons and knobs are labelled, where logos are shown etc), as well as sometimes seeking feedback on concepts for new hardware features. However, as previously outlined, it is not necessary to share this information with Serato for software integration purposes. Rather, it has been shared with Serato for additional design input, with others also available to provide the kind of input sought.

*Serato can ensure its software is compatible with new hardware within 2 months of launch, even without prior involvement*

204. As noted above, hardware providers can and do launch hardware without any prior involvement from Serato. In that case, Serato can support such hardware after launch. Examples of hardware where this has occurred include [**redacted**].

205. When hardware providers launch hardware without any prior involvement of Serato, it typically takes Serato around 2 months of developer effort to introduce a software integration once a project has been initiated, assuming normal work priorities.

**Following the acquisition, rival hardware providers will have several options available to protect their sensitive information**

206. As previously noted, while it is possible for Serato to develop a software integration for new hardware after the hardware has been launched, Serato prefers to be able to have at least some pre-launch involvement. This is to maintain the attractiveness of Serato's software offering from day 1 of the release of any given hardware.

207. Having said that, Serato is well aware that hardware developers have the option of simply not sharing any information with Serato prior to launch at all – with some already choosing not to do so. Serato has strong incentives (that will remain following the proposed merger) to ensure that other hardware providers remain confident in their ability to collaborate with Serato to maintain a high quality user experience for Serato customers.

208. Serato submits that there are several measures available to hardware providers that should give them the confidence they need that their sensitive information will be protected.

209. First, Serato has developed information protocols to apply to any such information which hardware developers choose to share with Serato before launch (which, as noted above, can be very limited). These protocols include Serato maintaining an operational board which will be entirely separate from the ATC board, as well as IT, physical and operational security obligations to protect partners' confidential information. Serato notes that these types of arrangements are commonplace for vertically integrated businesses that trade wholesale "inputs" with their downstream competitors. A few relevant examples of such interactions from comparable technology markets include:

209.1 Samsung and Google – Google makes the Android mobile operating system, which is the operating system used on Samsung phones. Google also makes the Google Pixel smartphone.

209.2 Microsoft and Apple – Microsoft and Apple compete and collaborate on many fronts, including competing in hardware, operating systems and software, and collaborating in the development of MS Office software for Mac operating systems.

209.3 Microsoft and other Windows laptop manufacturers – Microsoft makes hardware (surface laptops) and collaborates with Dell, HP, Toshiba and others for the Windows OS and software product suite.

209.4 Sony and Microsoft – While both companies compete with gaming consoles and games, most significant partnerships between Sony and Microsoft involves cloud computing and artificial intelligence. Recognizing Microsoft's Azure cloud platform's robustness, Sony has entered into agreements to use Azure for its own game and content-streaming services.

210. The Statement of Issues queries whether these protocols include sufficient safeguards to prevent information from being shared. In support of these concerns, the Statement of Issues points to the fact that [**redacted**].[133] [**Redacted**]**.**

211. Second, hardware manufacturers could choose to only share prototype hardware with Serato a mere two months before launch (by which time it would be of limited value from a competitive perspective), and no other sensitive information.

212. Third, hardware manufacturers could announce the launch of a new piece of hardware before it becomes available, [**redacted**].[134]

212.1 A step such as this would significantly increase the reputational costs to Serato and the merged entity of any undue delay in developing software integrations for the new hardware. It would also protect hardware manufacturers against the risk of ATC claiming credit for their innovations.

212.2 Finally, if the above measures are not considered sufficient, the hardware manufacturer has the option of simply not providing Serato with any information prior to launch at all. Integration with Serato's products is not a "must-have" for DJ hardware (with Serato input into the product being even less essential, as explained at [199] above). To the extent that a DJ hardware manufacturer would prefer to have a software integration on offer from launch, the manufacturer could partner with other DJ software providers.

**No significant impact on competition from the sharing of commercially sensitive information**

213. In summary, Serato submits that the Commission can be satisfied that the merger will not give rise to any concerns around the sharing of commercially sensitive information that could have significant impact on competition.

214. First, as previously outlined, the protocols Serato has developed are robust and comparable to those used in other contexts.

215. Second, hardware manufacturers will experience no significant competitive disadvantage if they choose to limit the information they share with Serato. Full collaboration with Serato is not necessary to develop a successful product, with many other parties also available to collaborate on the fundamental concepts behind new hardware features. To the extent that hardware provider does share some sensitive information with Serato before launch and the work has been scheduled in advance, this only needs to occur two months before launch[135] – which would not be enough time for Serato and ATC/Pioneer to make use of the information.

216. Finally, not involving Serato prior to launch at all is a perfectly viable option, as demonstrated by the examples previously provided of hardware launches that have not involved any collaboration with Serato. This fact means not only that hardware providers have a robust means to protect themselves

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133 Statement of Issues at [143].

134 For example:
[**redacted**]

135 Based on a waterfall SDLC rather than agile SDLC. This would allow Serato to define the interface, write stubbs to simulate the hardware for use development, and send the hardware provider blind builds.

from misuse of their confidential information, but also that Serato will be motivated to demonstrate strict adherence to its protocols so that hardware providers do not take this option, which means there may be a delay in the availability of Serato while Serato works retroactively to support the newly released hardware.

217. [**Redacted**].[136] [**Redacted**]:

217.1 [**Redacted**]

217.2 [**Redacted**]:

(a) [**Redacted**].

(b) [**Redacted**]

(c) [**Redacted**]

217.3 [**Redacted**]:

(a) [**Redacted**].

(b) [**Redacted**].

(c) [**Redacted**].

## G. Concluding remarks

218. For the reasons explained in this submission, the Commission can be satisfied that the proposed acquisition will not substantially lessen competition in any markets.

219. The strong evidence supporting the substitutability of mobile DJ apps for DJ laptop applications should, by itself, provide a sufficient basis to clear the proposed acquisition and eliminate any concerns regarding unilateral or vertical effects.

220. However, even if the Commission is not satisfied on that point alone, it can take additional comfort from the constraints the merged entity will be subject to as a result of:

220.1 the availability of other DJ laptop applications;

220.2 the universal compatibility of software with hardware due to the industry-wide use of MIDI and HID protocols; and

220.3 the provisions in the SPA which preserve Serato's incentives to compete against rekordbox and make any attempt to foreclose the merged entity's rivals in either the DJ software or DJ hardware markets even more unlikely.

221. Collectively, all of these constraints, mean that the proposed acquisition cannot plausibly substantially lessen competition on the basis of unilateral effects or on the basis of vertical effects (as the merged entity would have neither the ability or incentive to foreclose).

222. Similarly, Serato will be strongly incentivised to ensure that its hardware partners continue to have the confidence to engage with Serato as needed to facilitate the integration of their hardware

136 Statement of Issues at [**redacted**].

products with Serato's software. Measures are being put in place to give Serato's hardware partners the confidence they need that their sensitive information will be protected, and Serato will be strongly incentivised to demonstrate their effectiveness. In addition, hardware partners have other means within their own control to further protect themselves against the risk of their sensitive information being misappropriated.

223. Ultimately, the Commission should be left in no doubt about its ability to clear the proposed acquisition.

## APPENDIX A: Comparison of Serato and rekordbox pricing [partially confidential]

<table>
<tr><th>Year</th><th>Serato pricing [Confidential]*</th><th>rekordbox pricing</th></tr>
<tr><td>2012</td><td>[Redacted]</td><td>N/A</td></tr>
<tr><td>2012-2015</td><td>[Redacted]</td><td>N/A</td></tr>
<tr><td>2015</td><td>[Redacted]</td><td>[Redacted]</td></tr>
<tr><td>2015-2018</td><td>[Redacted]</td><td>N/A</td></tr>
<tr><td>2016</td><td>[Redacted]</td><td>N/A</td></tr>
<tr><td>2018</td><td>[Redacted]][137]</td><td>N/A</td></tr>
<tr><td>2020</td><td>[Redacted]</td><td>[Redacted]</td></tr>
<tr><td>2021</td><td>[Redacted]</td><td>N/A</td></tr>
<tr><td>2022</td><td>[Redacted]<br>September: Perpetual licences for Serato DJ Pro increase to US$249, and perpetual licences for Serato DJ Suite increase to US$449. Subscription pricing (US$9.99/month for Serato DJ Pro or US$14.99/month for Serato DJ Suite). This reflects Serato’s current pricing.</td><td>N/A</td></tr>
<tr><td>2023</td><td>N/A</td><td>January: Due to [redacted], rekordbox subscription fees are increased to the following:
<table>
<tr><th>Product</th><th>Annual (USD)</th><th>Monthly (USD)</th></tr>
<tr><td>rekordbox Professional</td><td>360</td><td>36</td></tr>
</table></td></tr>
</table>

[137] [**Redacted**].

<table>
<tr><th>Year</th><th>Serato pricing [Confidential]*</th><th>rekordbox pricing</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>rekordbox Creative</td><td>180</td><td>18</td></tr>
<tr><td>rekordbox Core</td><td>120</td><td>12</td></tr>
<tr><td>rekordbox Free</td><td>0</td><td>0</td></tr>
</table>
<br>March: In-app charge (for android and iOS) was introduce (which was previously free) to US$49.90 annually, $6.99 monthly or US$2.99 weekly.
</td></tr>
</table>

- Note that Serato has had a number of other bundles/ subscription plans, however the above focuses on the main offerings of Serato DJ Pro and Serato DJ Suite . Examples of other bundles included Serato DJ Pro + Serato Video, Serato DJ Pro + DVS (ClubKit), Serato DJ Pro + PNTDJ + FX + Flip + Play (Serato Essentials), only Serato Clubkit remains.

## APPENDIX B: Explanation of obligations on ATC about the operation of Serato and earnout mechanism in the SPA [partially confidential]

**The earnout mechanism in the SPA**

1. The purchase price under the SPA is structured as follows:

    a. an initial payment at completion of the Proposed Transaction of US$65 million, plus/minus [**redacted**]; and

    b. [**redacted**] contingent payments (defined in the SPA as the **Contingent Consideration**), which are payments to be made to the Sellers based on the performance of Serato [**redacted**]:

        i. [**redacted**].

        ii. [**redacted**]

2. Broadly, the Contingent Consideration is calculated as a multiple on Serato's [**redacted**]:

    a. [**redacted**].

    b. [**redacted**].

3. Earn outs are common risk mitigation tool used by buyers in M&A transaction to avoid overpaying, as they allow the seller to benefit from additional consideration if the business performs well, and the buyer obtains some protection against underperformance.

4. [**Redacted**]:

    a. [**redacted**]

    b. [**redacted**].

5. [**Redacted**]

6. It is important to note that earnouts carry inherent risks for sellers, given that the business's future performance—and, by extension, the achievement of earnout targets—falls under the buyer's control post-acquisition. Additionally, the earnout mechanism can lead to divergent interests between buyer and seller, particularly highlighted in this transaction where [**redacted**]. This arrangement could incentivise ATC to manage Serato in a manner that suppresses [**relevant profit metric**] during the relevant periods to reduce the Contingent Consideration.

7. Consequently, ensuring Serato operates as usual to achieve the outlined business plan was crucial for the Sellers, who demanded the SPA include specific requirements on ATC regarding Serato's post-completion management (the **Seller Protections**) to maximize the likelihood of realising the earnout potential.

**The Seller Protections in the SPA**

8. The overarching obligation under the Seller Protections is that ATC must "act in good faith" and, using "all reasonable endeavours", support the growth of and operate and manage Serato with a view of "maximising [**relevant profit metric, redacted**] (the **Overarching Obligation**).

9. In some M&A transactions, buyers may attempt to dilute the Seller Protections by committing merely to refrain from acting in bad faith or from engaging in activities solely aimed at diminishing the earnout payable. These weaker type of protections pose significant enforcement challenges for sellers, as proving "bad faith" involves a high burden of proof. Furthermore, buyers might cite commercial justifications for their actions, even if those actions result in a lower earnout, complicating the sellers' ability to contest such behaviours effectively.

10. The Seller Protections and the Overarching Obligation are not watered down Seller Protections that may be difficult to enforce or easily circumvented by the buyer. In particular:

    a. the obligation to act in "good faith" is likely to be interpreted by the courts in such a way that requires ATC to act honestly, fairly and with transparency, which would prevent ATC in engaging in behaviours that are not expressly prohibited by the SPA but would be expected to impact Serato's [**relevant profit metric**].

    b. the obligation to use "all reasonable endeavours" to maximise [**relevant profit metric**] is a high standard as it requires all reasonable paths or actions to be exhausted and that "some subordination of commercial interests may be required"[138]; and

    c. it imposes a positive obligation on ATC to ensure Serato is operated, and its growth supported, so to maximise [**relevant profit metric**] rather than merely asserting negative control which prevents ATC from taking actions that may negatively impact the earnout.

11. Without limiting the generality of the Overarching Obligation, ATC also separately commits to a variety of more specific Seller Protections that can be generally categorised as follows:

    a. Operational Covenants: These require ATC to operate the business in a 'normal' or 'ordinary' manner, thereby preventing changes that could impact the earnout.

    b. Specific Performance Covenants: These explicitly outline certain actions that the ATC must or must not undertake.

    c. Approval Rights: These give the sellers the right to approve certain decisions made ATC post-completion.

**The Seller Protections prohibit ATC from foreclosing rival hardware providers**

12. The Statement of Issues states that the Commission is not yet satisfied that the SPA conditions preclude the merged entity from foreclosing rivals[139] and that *that "there are a number of ways ATC could act against the interests of rival hardware manufacturers, whilst still remaining in compliance with its obligations under the SPA."*[140] Two examples are provided:

[138] Brooke Homes (Bicester) Ltd v Portfolio Property Partners Ltd [2021] EWHC 3015 (Ch)
[139] SOI at [108].
[140] SOI at [106].

a. allowing rival hardware manufacturers to partner with Serato, but imposing internal resourcing decisions in terms of the time and cost for development and integration, so as to prioritise integration of Pioneer DJ hardware over rival hardware; and

b. offering different variations of Serato software to different hardware manufacturers.

13. The other foreclosure strategies mentioned in the SOI are:

a. raising the cost of the licensing fee (and other engineering fees);

b. refusing to integrate, delaying integration or integrating less effectively (such as only allowing certain features to work with a controller); and

c. tying or bundling products. [141]

14. The table below sets out how the Seller Protections in Clause 6, Schedule 11 of the SPA prevent ATC from engaging in any of the foreclosure strategies until after 31 December 2028.

[141] SOI at [99].

| **Possible Foreclosure Behaviour** | **Seller Protection Breached (see key below table)** | **Reason for breach** |
|---|---|---|
| Refusing to integrate Serato with non-ATC hardware partners | Clause 6.1, Sch 11 (Overarching Obligation) | Foreclosing Serato's other hardware partners will have an obvious and direct impact on Serato's revenue and [**relevant profit metric**] as such an action would (if practically possible):<br><br>• result in current Serato customer (who use non-ATC hardware) switching to alternative DJ software products; and<br>• reduce the size of Serato's addressable market, which will adversely impact future sales. |
| | Clause 6.2.9(a), Sch 11 (Scope of Business) | Restricting Serato DJ so it is only compatible with ATC hardware would materially change the scope of Serato's business. |
| Allowing rival hardware manufacturers to partner with Serato, but imposing internal resourcing decisions in terms of the time and cost for development and integration, so as to prioritise integration of Pioneer DJ hardware over rival hardware (see SOI at 106.1)<br><br>Delaying integration or integrating less effectively (such as only allowing certain features to work with a controller) | Clause 6.1, Sch 11 (Overarching Obligation) | This conduct will likely result in (A) hardware manufacturers reducing the amount of business they do with Serato, (B) reducing the throughput Serato delivers (so less hardware products are on the market which are compatible with Serato), (C) hardware manufacturers ending their partnering arrangements with Serato (and pursuing others), or (D) legal claims against Serato to the extent it fails to deliver in accordance with its contract. These outcomes would detrimentally affect Serato's [**relevant profit metric**]. |
| | Clause 6.2.1, Sch 11 (Prudent and Consistent Management) | In the 12 months prior to Completion, Serato will be dedicating resources to meet its partnering agreement commitments and partners' commercial expectations to secure future business. If ATC were to engage in this conduct, it would therefore not be managing Serato in a consistent manner. |
| | Clause 6.2.9(a), Sch 11 (Scope of Business) | This would constitute a material change in the nature or scope of Serato's business as it was conducted prior to Completion (i.e., it would be shifting Serato's focus from integration across multiple manufacturers equally to a focus on ATC equipment). |
| Offering different variations of Serato software to different hardware manufacturers (See SOI at 106.2) | Clause 6.1, Sch 11 (Overarching Obligation) | Offering a different product to a subset of Serato's userbase would likely negatively impact Serato's [**relevant profit metric**] as users of non-ATC hardware will likely use other DJ software products if it is perceived that the material features of Serato DJ are being withheld from them.<br><br>Further, managing and developing different variations of Serato for different hardware partners will impact Serato's cost scale exponentially which will have a negative impact on Serato's [**relevant profit metric**]. |

| | | |
|---|---|---|
| | | This conduct would be a breach of the good faith obligation as it would be an attempt to divert DJs to ATC hardware at the sacrifice of Serato's trading position. |
| | Clause 6.2.1, Sch 11 (Prudent and Consistent Management) | Currently Serato does not offer different variations of Serato software to different hardware manufacturers. If ATC were to engage in this conduct, it would therefore not be managing Serato in a consistent manner. |
| Raising the cost of the licensing fee (and other engineering fees) | Clause 6.1, Sch 11 (Overarching Obligation) | Serato already considers that [**redacted**], which would reduce [**relevant profit metric**]. |
| Tying or bundling products | Clause 6.2.1, Sch 11 (Prudent and Consistent Management) | Serato currently licenses Serato DJ to its hardware partners and allows those partners to bundle their hardware with Serato (on a "plug and play" basis). Accordingly, any refusal to allow rival DJ hardware supplier partners to bundle their hardware with Serato would not be managing Serato in a consistent manner. |
| | Clause 6.1, Sch 11 (Overarching Obligation) | Any refusal to allow rival DJ hardware supplier partners to bundle their hardware with Serato, essentially amounts a refusal to integrate with non-ATC hardware. This will have a direct impact of Serato's [**relevant profit metric**] as articulated above. |

Key

| | |
|---|---|
| **Clause 6.1, Sch 11 (Overarching Obligation)**: | *"[ATC] undertakes to the Sellers that it will, during the Contingent Consideration Period, act in good faith and, using all reasonable endeavours, support the growth of and operate and manage [Serato] with a view of maximising the [**relevant profit metric**] for each Relevant Period*." |
| **Clause 6.2.1, Sch 11 (Prudent and Consistent Management):** | *"[ATC] will ensure that [Serato] is managed in a prudent manner consistent with the 12 months immediately prior to Completion*." |
| **Clause 6.2.9(a), Sch 11 (Scope of Business):** | *"[ATC] will ensure that [Serato] does not (without the prior written consent of the Sellers' Representative)…materially change the nature or scope of its Business as presently conducted….*"] |

## APPENDIX C: Information about other competitors in the DJ software market

### Djay (Algoriddim)

*Features and innovation*

1. As shown in Annexure 9 of the Application, djay offers greater functionality than Serato and rekordbox. This includes support for Apple Music and Automix mode, [**redacted**].

2. Algoriddim was the first to release stems technology. It used open source library spleeter to be the first to launch stems functionality to market. It subsequently partnered with AudioShake to embed AudioShake's source separation into djay Pro5 and launch a new version of Neural Mix, offering more advanced functionality.

3. Other notable innovations by Algoriddim/djay include Vision Pro for Apple, the launch of the first AI-based DVS for mobile devices,[142] integration with Shazam's audio recognition technology,[143] and the first AI-powered hand tracking system.[144]

*Features for advanced users and professionals*

4. As noted above, djay offers greater functionality than Serato and rekordbox.

5. Algoriddim promotes djay Pro as suitable for professionals: "djay provides a complete DJ software for all DJs. The DJ software seamlessly integrates with your music library, giving you instant access to millions of tracks. You can perform live, record mixes on-the-go, or enable Automix mode. Djay is the perfect DJ software for casual and mobile DJs, while djay Pro is a DJ software designed for professional DJs."

6. Consistent with this, djay Pro is promoted by a range of famous DJs.[145]

*Usability and interface*

7. In Serato's view, djay's interface is more advanced than Serato's. [**Redacted**].

8. djay is an Apple Design Award-winning app for iOS, iPadOS and macOS.

*Music integrations*

9. djay offers an extensive list of music integrations, including, significantly, with Apple Music. This integration gives djay a competitive advantage over other DJ software solutions, as Apple Music is a leading, mainstream music streaming service used by a wide audience. The integration includes the ability to use the Apple Music cloud feature for music storage.

10. djay is also integrated with Tidal, SoundCloud, Beatport and Beatsource.

11. djay is capable of automatically reading Serato's library, including track metadata.

*Hardware compatibility*

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142 https://www.algoriddim.com/news/440-algoriddim-revolutionizes-djing-with-world-s-first-ai-based-digital-vinyl-system-dvs-for-mobile-devices

143 https://www.algoriddim.com/news/439-algoriddim-integrates-shazamkit-technology-with-djay

144 https://www.algoriddim.com/news/433-algoriddim-introduces-world-s-first-ai-powered-hand-tracking-system-for-djs.

145 https://www.algoriddim.com/company#ambassadors

12. djay is compatible with a broad range of Mac, Windows and iOS hardware.

13. djay is compatible with a wide range of DJ hardware, from basic cheap entry-level controllers, motorized platter controllers, through to full digital vinyl systems and CDJs.

*Reputation*

14. Many articles describe djay as a product that competes directly with Serato.[146]

15. Algoriddim has 315,000 followers on Facebook.

[146] For example,
- https://musictech.com/guides/buyers-guide/best-dj-software/
- https://www.digitaldjtips.com/best-dj-software-for-stems/
- https://www.musicradar.com/news/best-dj-software-apps
- https://www.thedjrevolution.com/best-dj-software/
- https://musictech.com/guides/buyers-guide/best-dj-software/
- https://www.makeuseof.com/windows-10-dj-applications/

**DJuced (Hercules)**

*Features and innovation*

15. DJUCED offers the key features required for performance and mixing; including hot cues, samples, loops and stems.

16. It has a high focus on usability with built-in video training and an Interactive Assistant (IMA) that provides intelligent music suggestions and guidance for track selection, beatmatching, and mixing.

*Features for advanced users and professionals*

17. According to DJuced's website, *"DJUCED offers all you can expect from a Professional DJ Software:*

    - *Modular interface, customizable according to your tastes.*
    - *A full suite of effects.*
    - *Loops, hotcues, beatjump, multilayer samplers*
    - *Everything to remix your songs.*
    - *Synchronization up to 4 decks, slip, quantize and djuced stems modes to push the limits of traditional mixing.*
    - *record yourself, save and share*
    - *Save your Set and share it on Mixcloud or Soundcloud, in just a few clicks."*

*Usability and interface*

18. DJuced offers a straightforward and intuitive workflow. It uses standard industry conventions, making it approachable for all levels of DJs.

19. DJuced also offers a DJ Academy, a series of built-in video tutorials and training modules to accelerate learning for beginners.

*Music integrations*

20. DJuced offers integrations with Beatport, Beatsource, Soundcloud and Tidal.

*Hardware compatibility*

21. DJuced is designed specifically to work seamlessly with Hercules DJ controllers, offering plug-and-play functionality and optimised controls.

*Reputation*

22. DJuced began as an in-house software solution for buyers of Hercules DJ controllers. As a result, the widespread adoption of the product is limited to Hercules controller users. However, the software has received highly positive reviews and feedback from the community, for example:

    - https://www.amazon.com/hz/reviews-render/lighthouse/B0154P5P50?filterByKeyword=djuced+software&pageNumber=1&tag=buylocal0e8-20
    - https://reddit.com/r/Beatmatch/comments/run1py/is_djuiced_good/

**EDJING Mix**

*Features and innovation*

23. EDJING Mix is a mobile DJ app available for iOS and Android devices, developed by French company MWM, who ranks as France's top app publisher. MWM states that this is the #1 app to mix on your iPhone, iPad, Android phones & tablets.

24. EDJING Mix features a straightforward and intuitive layout, making it easy for beginners to get started with DJing.

25. EDJING Mix offers track sync/auto beatmatching. The automatic beatmatching feature helps DJs keep their tracks in sync, even if they are not familiar with beatmatching techniques.

26. EDJING Mix also offers automix, which automatically transitions between songs. [**Redacted**].

27. EDJING Mix offers hot cues, looping and sampling. These are all the necessary features for creative mixing.

28. EDJING Mix offers a range of effects allowing DJs to add creativity to their mixes.

29. DJs can record their mixes and share them directly to social media platforms. As discussed below, EDJING Mix also offers cloud library integrations.

*Features for advanced users and professionals*

30. Timecode vinyl (DVS) support to control the app with turntables.

*Usability and interface*

31. Simple, easy to use interface for beginners and professionals

*Music integrations*

32. EDJING Mix offers integrations with:

    a. Streaming services: Beatport, Beatsource, Soundcloud and Tidal

    b. Cloud libraries: iCloud, Google Drive and Dropbox. This allows DJs to play their own music from the cloud, wherever they are.

33. EDJING Mix also offers support for local music files, allowing DJs to mix their own music.

*Hardware compatibility*

34. According to its website,[147] EDJING Mix works with timecoded and standard audio vinyl. The new version of EDJING Mix is also more friendly with traditional DJ hardware, and supports MIDI as well as now DVS (Digital Vinyl System).

35. In this way, in addition to MIDI controllers, users can connect to EDJING Mix through two vinyl turntables. EDJING Mix can be used with both timecoded and audio vinyls, with users able to access and use all EDJING features (such as applying FX and recording).

*Reputation*

[147] https://world.edjing.com/mix/ios

36. EDJING Mix has received positive reviews from users, praising its ease of use and features.

37. The app has a dedicated community of users who share tips, tricks, and tutorials.

**EngineDJ (Denon and Numark)**

*Features and innovation*

38. EngineDJ offers a standalone workflow/library management app. Its system can be divided into two parts:

    a. EngineDJ desktop a professional DJ collection management software for music library organization and track preparation, that includes a standalone playback mode with cue points, loops, multiple decks, pitch shifting and a crossfader and runs on a desktop or laptop computer; and

    b. A purpose-built operating system (OS) to power InMusic's standalone DJ hardware for performance, which also offers flexible music collection management directly from the hardware.

39. EngineDJ offers library analysis tools to analyse music tracks, including beatgrids, BPM, key, hot cues and loops. It was the first embedded software system to incorporate stems.

*Features for advanced users and professionals*

40. EngineDJ has a focus on features which allow seamless live mixing. These include large responsive platters, performance pads, hardware effects, and customizable lighting control.

*Usability and interface*

41. EngineDJ offers intuitive, high resolution touch screens. It offers visual feedback and intuitive track navigation on supported hardware.

42. The EngineDJ desktop software includes track preparation and library management tools, allowing for seamless syncing with standalone hardware.

*Music integrations*

43. EngineDJ offers the most comprehensive import capability for third party libraries in the entire industry. It integrates with Apple Music/iTunes, and can also support imports from rekordbox, Serato DJ and Traktor databases. The import functionality carries over music, playlists, hot cues and loops.

44. It also includes built-in streaming support for TIDAL, Beatport LINK, Beatsource LINK, Soundcloud GO+ and Amazon Prime Music, without the need for a laptop. EngineDJ pioneered the in-hardware support for some of these services.

45. In addition, EngineDJ integrates with, and allows for direct access to music stored on, the Dropbox and Google Drive cloud services.

*Hardware compatibility*

46. EngineDJ offers the best user experience if the user prepares music using the Engine DJ desktop app, to then use on DenonDJ or Numark hardware (which can also be used as MIDI controllers for other DJ software). A growing range of standalone Denon and Numark hardware (which integrates with EngineDJ) is becoming available. This range caters to different user needs and budgets. For example, the Numark Mixstream range is available at entry level prices.[148]

[148] https://www.numark.com/mixstream-pro

*Reputation*

47. EngineDJ is rapidly gaining popularity, thanks to its innovative standalone systems and the features available through it. It is increasingly being used in professional settings, and has been praised for making advanced features and modern workflows available to DJs of all skill levels.

**Mixxx**

*Features and innovation*

48. Mixxx is free and open source DJ software for Windows, macOS, and Linux. There is no cost to download or use it, and its source code is freely available for modification and improvement by the community.

49. Mixxx offers four virtual decks for advanced track layering and mixing possibilities (4-deck mixing).

50. Mixxx includes a wide selection of effects, cues, and flexible loop controls for creative transitions and remixing.

*Features for advanced users and professionals*

51. Mixxx may not have the same level of polish, feature set, or industry-standard hardware compatibility as other software offerings for high-end professional use. However, it is supported by an active and dedicated community of developers and users, ensuring continuous improvement, bug fixes, and troubleshooting resources.

*Usability and interface*

52. While offering advanced features, Mixxx maintains a relatively straightforward interface for both beginners and experienced DJs.

53. Mixxx offers cross-platform functionality. It works seamlessly on Windows, macOS, and Linux, expanding its accessibility.

*Music integrations*

54. Mixxx can import and utilise Traktor DJ music libraries, and import and manage music libraries from iTunes.

55. Mixxx is compatible with a broad range of music file formats, including lossless FLAC, WAV, and AIFF formats as well as lossy MP3, M4A/AAC, Ogg Vorbis, and Opus formats.

*Hardware compatibility*

56. Mixxx Is compatible with numerous DJ controllers.

57. It uses both the MIDI and HID protocols, providing flexibility in hardware choice. It also offers MIDI learning functionality (a programmable mapping engine which facilitates customisation and mapping for non-supported controllers).

58. Mixxx also has support for timecode vinyl, allowing for the use of traditional turntables.

*Reputation*

59. Mixxx is a respected open-source alternative, recognised as a reliable and free option for DJ software.

60. It is a community-driven product with a strong emphasis on its passionate user base, collaborative development, and user support forums.

**TraktorPro**

*Features and innovation*

62. TraktorPro pioneered stem mixing. This is the use of stems using a special file format (pre-machine learning) that enables DJs to mix individual elements of a track (such as the vocals, drums etc) for real-time remixing.

63. TraktorPro offers remix decks. These are dedicated sample decks to load lops, one-shots, and build live remixes.

64. TraktorPro offers an extensive library of high quality effects and flexible FX routing options.

*Features for advanced users and professionals*

65. TraktorPro is renowned for its use in demanding professional performance scenarios, in particular in clubs oriented towards dance/EDM music. It is especially well regarded for its superior audio engine and audio processing.

66. TraktorPro is a common choice for professional and touring DJs.

*Usability and interface*

67. TraktorPro offers a classic interface, with scope for high levels of customisation. This includes flexible MIDI-mapping.

*Music integrations*

68. TraktorPro offers direct, in-software access to the Beatport and Beatsource catalogues. This facilitates seamless browsing and purchasing of music.

69. TraktorPro is also integrated with Soundcloud, allowing for the direct streaming of music.

*Hardware compatibility*

70. TraktorPro was primarily developed for optimal performance with Native Instruments controllers (specifically, the Traktor Kontrol series). However, it also offers support for a wide range of third party controllers through its MIDI-mapping functionality, as well as advanced HID integration for specific controllers (including Pioneer CDJs).

*Reputation*

71. TraktorPro is very well regarded, and is one of the longest-running and most influential brands of DJ software. It is can easily be found in professional club booths around the world. Its user base is highly devoted, and it has a particularly strong following among techno and house DJs.

72. Traktor Pro v3.9 was recently named Best DJ Software at 2024 NAMM TEC Awards.

**VirtualDJ**

*Features and innovation*

73. As shown in Annexure 9 of the Application, VirtualDJ offers greater functionality than Serato and rekordbox.

74. VirtualDJ markets itself as having "more features than any other software" and that the "latest groundbreaking technology is always available in VirtualDJ first";[149]

**Figure C1: Virtual DJ marketing**


75. VirtualDJ offers:[150]

    a. "professional grade high-end audio engine with crystal clear sound";

    b. a comparable music management system to Serato and rekordbox;

    c. a range of ancillary features such as broadcasting abilities (allowing DJs to perform sets online) and visualisations and video graphics (which can be used on a screen/projector behind a DJ during a set".

76. VirtualDJ was one of the first DJ software offerings to integrate with music streaming services. It was also the first to support karaoke formats. Other notable innovations include intelligent automix, timeline remix engine, skins and beatgrid FX.

*Features for advanced users and professionals*

77. VirtualDJ offers the following features specifically targeted at professionals:

    d. **Personal concierge**: "With the Concierge Service you get your own dedicated Support Agent that will provide you with that extra service your business needs. Someone who answers all your questions quickly, knows your history and setup, and gives qualified help. Your Concierge Agent is there for you for direct one-to-one talk when you need it the most."

    e. **Phone support**: "Ever had a configuration problem 5mn before starting an event? When it's business-critical, you want to be able to reach your phone and talk directly to one of our

149 https://www.virtualdj.com/
150 https://www.virtualdj.com/

Customer Support specialists, and solve your problem on the spot. Business users have exclusive direct phone access for support."

f. **Professional customisations**: "Business users have exclusive access to our Customization Service, where VirtualDJ developers with years of experience and inner knowledge of the VirtualDJ source code, can create on-demand scripts or skins, just for you, per your specifications."

*Usability and interface*

78. VirtualDJ offers a range of skins for its interface, including community-built skins. One of those skins mimics the Serato interface.

79. VirtualDJ is "the most used DJ software on the planet".[151]

**Figure C2: VirtualDJ marketing**


*Music integrations*

80. VirtualDJ offers an extensive list of music integrations, including with iDJPool, Tidal, Deezer, Beatsource, BeatPort and Soundcloud.

81. VirtualDJ's library is capable of automatically reading Serato's library, including track metadata.

*Hardware compatibility*

82. VirtualDJ has built-in native support for a vast amount of hardware. According to its website, it supports more DJ controllers and hardware than any other DJ software provider, ranging from "easy to use entry level controllers to advanced club mixers".

83. "Furthermore, VirtualDJ comes with an intuitive mapper interface and midi-learn capability for customization and tweaks, as well as creation of your own mappers. And with a powerful scripting language, almost every facet of the software can be controlled and mapped."[152]

*Reputation*

151 https://www.virtualdj.com/
152 https://www.virtualdj.com/

84. VirtualDJ is marketed as the most downloaded DJ software globally. Its website has a running counter of how many times the software has been downloaded, which is currently around 151 million times.

85. Many online articles promote VirtualDJ as a product directly competing with Serato.[153]

86. VirtualDJ markets its software with testimonials from world famous DJs including David Guetta, Dimitri Vegas, Qbert, Afrojack and Deniz Koyu.

87. VirtualDJ has 1.1 million followers on Facebook.

[153] For example, https://www.digitaldjtips.com/best-software-for-djs/

## APPENDIX D: Comparison of interfaces of different DJ software products

### Figure D1: Serato DJ Pro - vertical waveform


### Figure D2: VirtualDJ - Serato DJ skin

**Figure D3: VirtualDJ – Pro skin**


**Figure D4: VirtualDJ – starter skin**

**Figure D5: Algoriddim djay - horizontal waveforms**


**Figure D6: Algoriddim djay - vertical waveforms**

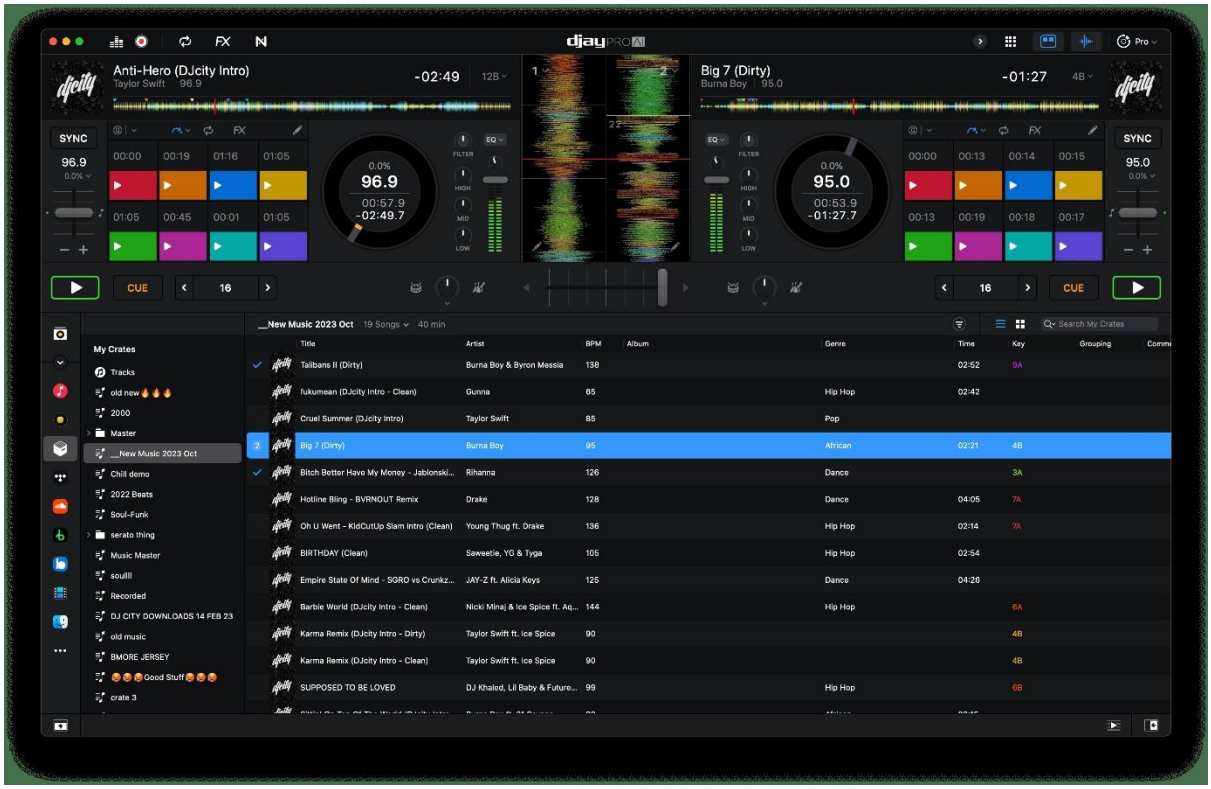


**Figure D7: DJUCED - horizontal waveforms**

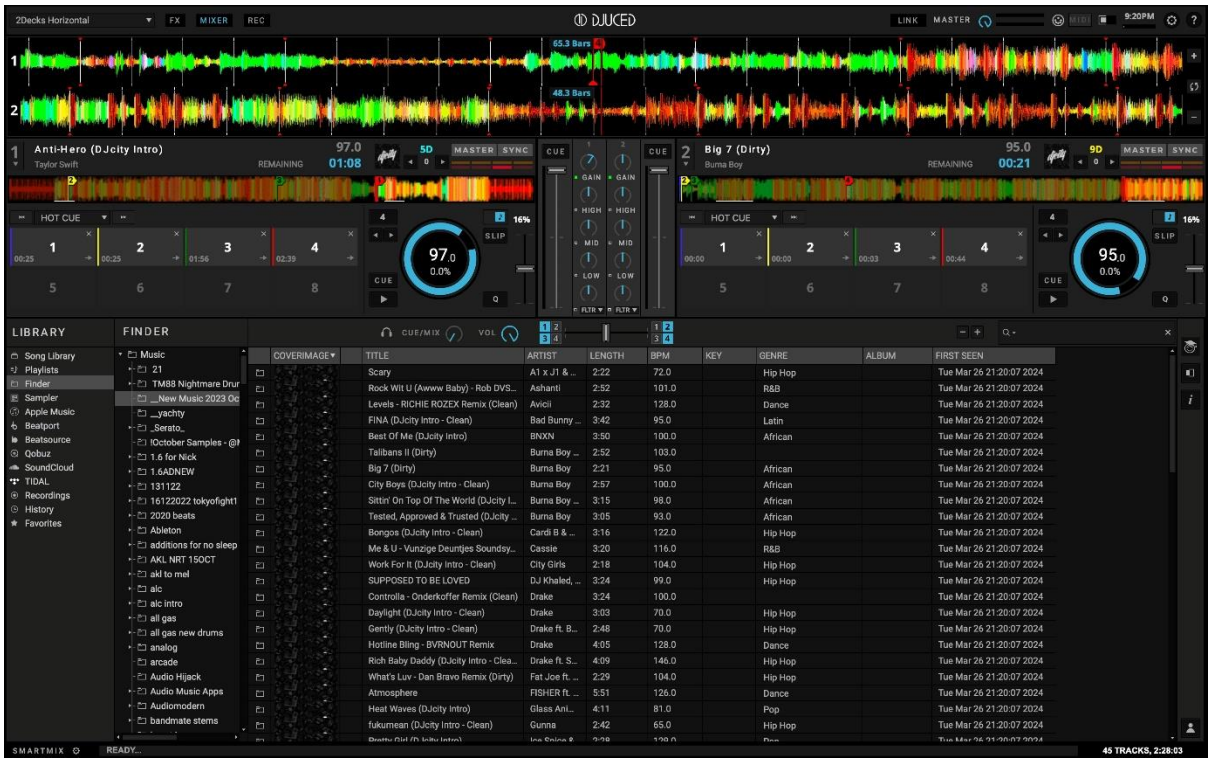



**Figure D8: DJUCED - vertical waveforms**

**Figure D9: Engine DJ (OSX)**

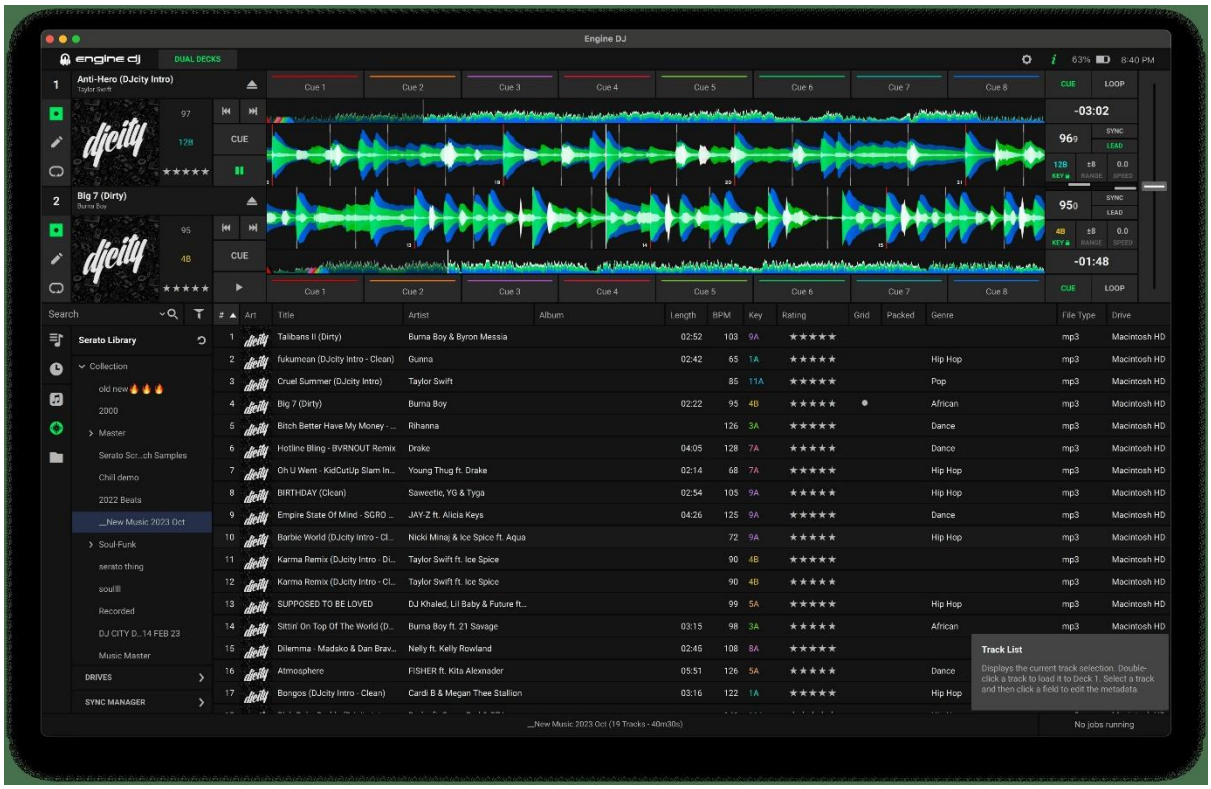
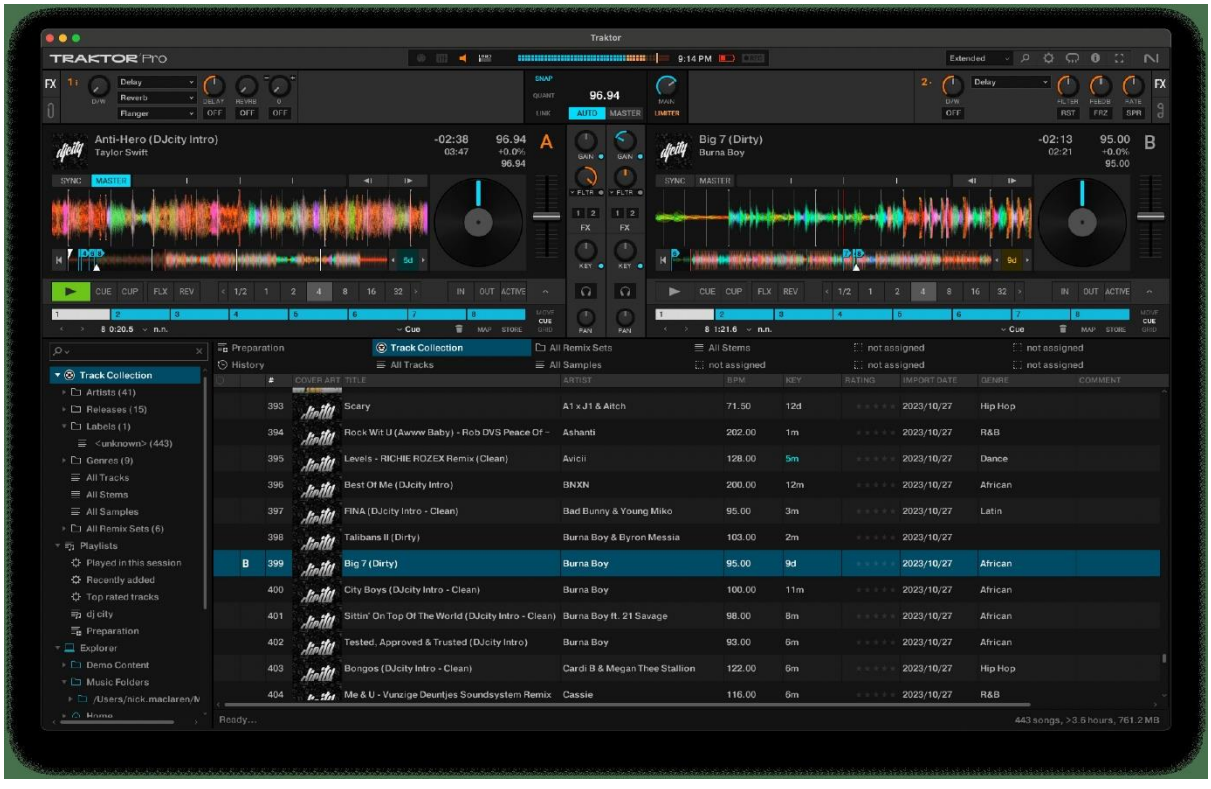



**Figure D10: rekordbox – horizontal waveforms**

**Figure D11: rekordbox – vertical waveforms**


**Figure D12: Traktor Pro**



## APPENDIX E: ClearPoint Report

**(attached)**

# DJ Software Build Approach in 2024

**Software Engineering Expert review**

2nd April 2024

clearpoint

# Executive summary

- The purpose of this assignment is to provide a reasonable high level estimate of the software engineering effort to build a competitive product to Serato DJ Pro, Virtual DJ and others
- This assignment has derived a product definition, conceptual core components, a building block architecture and a team topology and plan for building the competitive product.  NOTE: this assignment also contemplates the effort to deliver an additional Apple iPhone experience which Serato DOES NOT currently provide.
- Given the assumptions, domain knowledge, requisite skills and capital, there does not appear to be any unique or novel constraints to a competitor building a software product to compete with Serato

# Executive summary_*continued*

- A fresh competitor entering the market has a number of natural product advantages and significant benefits through modern hardware software engineering  tools, practices and processes
- Based on the product definition, assumptions and approach two options to market yield the following estimates
  - **Option 1 - Integrate and build**
    18 month time to market (including beta programme) on 3 x 7 to 9 person squads utilising open source and commercial components
  - **Option 2: Adjacent competitor enters DJ software category**

    12 month time to market (including beta programme) based on existing product/platform components and skills

# Brief and scope

Understand the nature of the time and investment required to redevelop the existing Serato product software based on the available technology landscape in 2024.

Scope, approach and  deliverables:

- Define the scope of products for software engineering rebuild
- Define and document the assumptions, constraints, dependencies and document domain considerations
- High level review and walkthrough of the software components that comprise the defined Serato product
- Analysis and consultation regarding any core areas of IP, know-how etc
- Derive high level model of replacement architecture, build and deployment
- Derive a high level implementation approach, plan and effort estimate

# Goal

- Develop a competitive product to Serato DJ Pro and Virtual DJ (for Laptop and including iPhone)
- The product will support the most popular DJ equipment in market today (i.e. top 5 - 10 models initially)

# Key assumptions

- Core strategy is to utilise 3rd party / open source components and libraries to deliver the product efficiently
- Leverage modern engineering practices and cutting-edge development technologies

# Expert review team

## Bain Hollister

Bain is Executive Director and co-Founder at ClearPoint.

An engineering graduate of the University of Auckland, University of Canterbury and of Harvard Business school, Bain has worked internationally in the technology sector in the US, UK and New Zealand. With over 25 years experience in various software engineering domains, he has worked across a range of technical engineering, strategy and advisory roles. As Executive Director he specialises in software technology strategy and advice with C-level executives and directors.

Bain is a member of the Institute of Directors, and holds executive and board roles.

## Greg Montgomery

Greg previously held high level positions as Chief Technology Officer (CTO) & VP of Engineering. Greg has more than 25 years of international experience across Asia & Europe, and has worked in a range of companies from New Zealand's largest company, to consultancies and innovative digital startups. More recently he has been consulting through MontyTec, specialising in technology strategy & design solutions with a focus in the entertainment space, large scale digital media delivery, and applied low-cost distributed machine learning using edge computing.

Greg is a seasoned technology leader with a consistent track record of building strong engineering teams and delivering innovative solutions for a large number of industries (from finance to media).

# Working with market-leading organisations



































# Product approach and assumptions

# 1. Modern software engineering practices

Software engineering tools, techniques and processes have improved by many orders of magnitude since the inception of Serato. A competitor will likely leverage modern software engineering practices such as;

- Automation and smart development tools (i.e. drive significant build time improvement using QT tools)
- Use of Co-Pilots and IDE's that drive best practice use of QT and C++
- Focus on quality - Continuous Integration and Continuous Delivery processes (CI/CD) with automated testing throughout the development cycle
- Cross functional teams that can work on product components with minimal dependencies with other teams

*Note: a new entrant will likely have no existing legacy codebase, integrations or compatibility constraints. Although these may accrue over time; the initial absence of these constraints is highly advantageous to speed of product development.*

# 2. Leverage existing industry components

A competitor is likely to want speed to market.  An integrated solution using readily available open source & commercial components will accelerate development.  Examples of such components include;

- JUCE for cross-platform audio application development and MIDI support
- Latest stem based audio analysis with components like AudioShake (Utilises AI-driven technology for audio separation)
- QT for cross-platform UI/UX and performance
- C++ or Rust to build out core components and integrations
- Off the shelf application license management with a best-fit partner
- Logging, analytics and notifications with well known platforms like Sentry
- Initial focus on Mac Apple Silicon and Windows (minimum version, 64 bit etc)

# 3. Skills: Audio, Product and Software engineering

In order to evaluate the market opportunity in the first instance, it is likely that a competitor will have significant industry and domain experience.  In addition to core skill sets such as Sound Engineering that are reasonably available in the industry, a competitor will also have access to strong mainstream software engineering and product development skills.

In layman's terms, the assumption is that a competitor will have access to the necessary skills to design, develop, deploy and operate the product.  Roles that may be included in the competitors team include

- Product & Design Leads
- Audio/DSP Engineers
- App Engineers
- DevOps
- Native iOS Engineers

# 4. Know how: Experience design, feature requirements, priorities

Again, in order to evaluate the market opportunity it is likely that a competitor will understand to a reasonable level of detail

- the required product experience design, and
- the features and priorities within the product, and
- an appropriate component architecture for the product.

In other words, it is assumed that a competitor knows what needs to be built, in what order, and how the product should be experienced by the end users.

This is an important distinction as a new entrant competitor will have been “shown the way” by Serato and the other existing products that have created the category over 16+ years.  This means competitor can derive their product design off existing products dramatically reducing implementation time and R and D effort.

# Defining the product

# Conceptual core components

01

Library Management (i.e. Crates and filtering based on metadata)

02

Mix Architecture (including Audio Graph)

03

Transport Engine

04

Audio Metadata extraction and storage

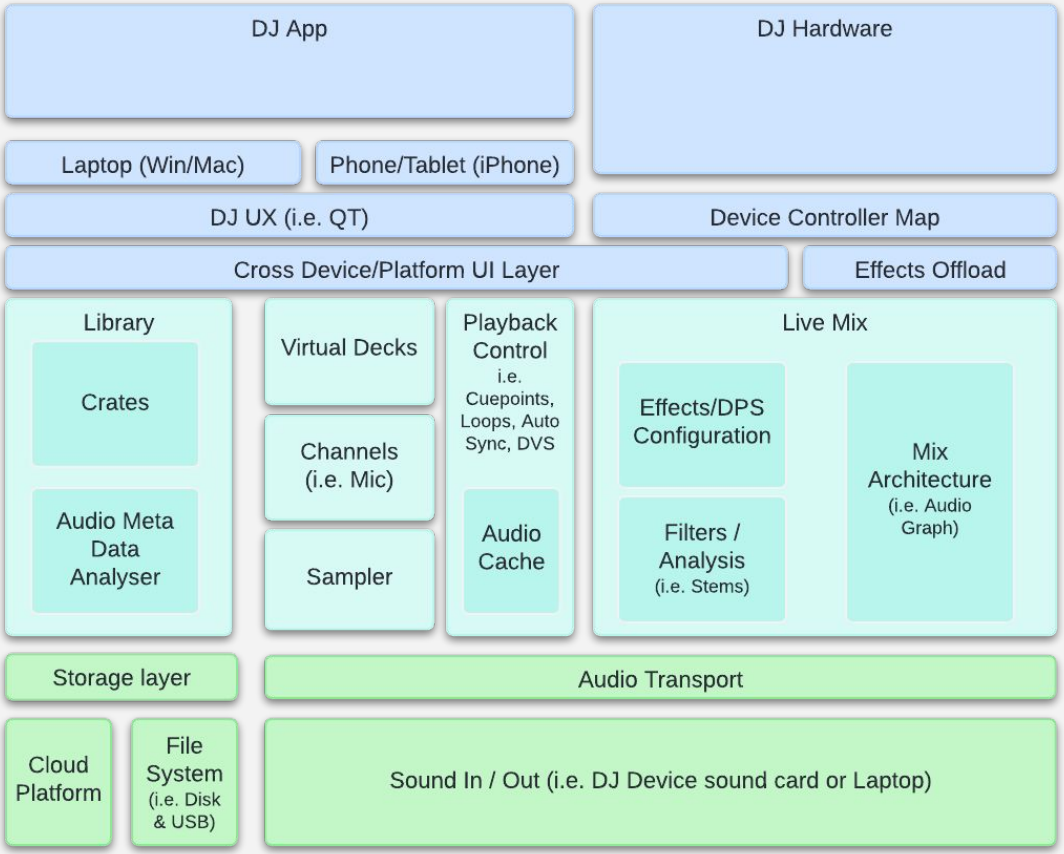
05

DSP, effects etc (Mix Architecture)

06

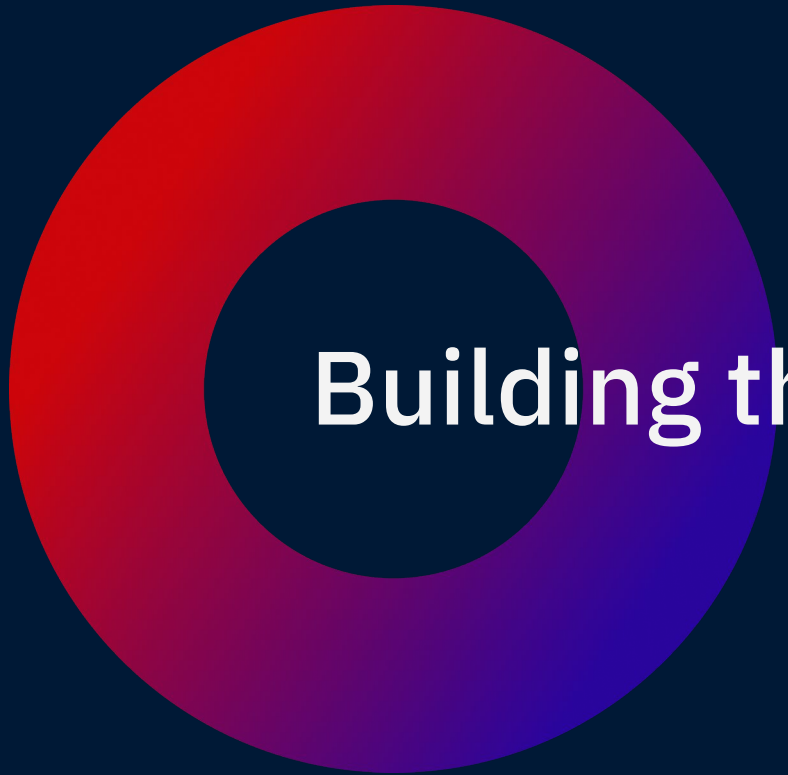
Connectivity and Mapping of Device Interfaces (MIDI & HID)

# Modular building blocks



# Product features in first full production release

- Library Management
- Mixing and real time playback
- Cue points and looping support
- Beatgrids, tempo and key syncing
- Effects and Sampler support
- DJ Device Deck support (MIDI & HID assignment)
- Smart AI based metadata extraction via partnership with AudioShake or equivalent
- Laptop App is the first target device followed by the iPhone App
    - iPhone App will lag by ~3 months to allow core discoveries/learnings to be made in the Laptop App stream of work. De risking the development so corrections will not be needed across both platforms.



# Building the product

# Option 1: Proposed build approach

## Approach

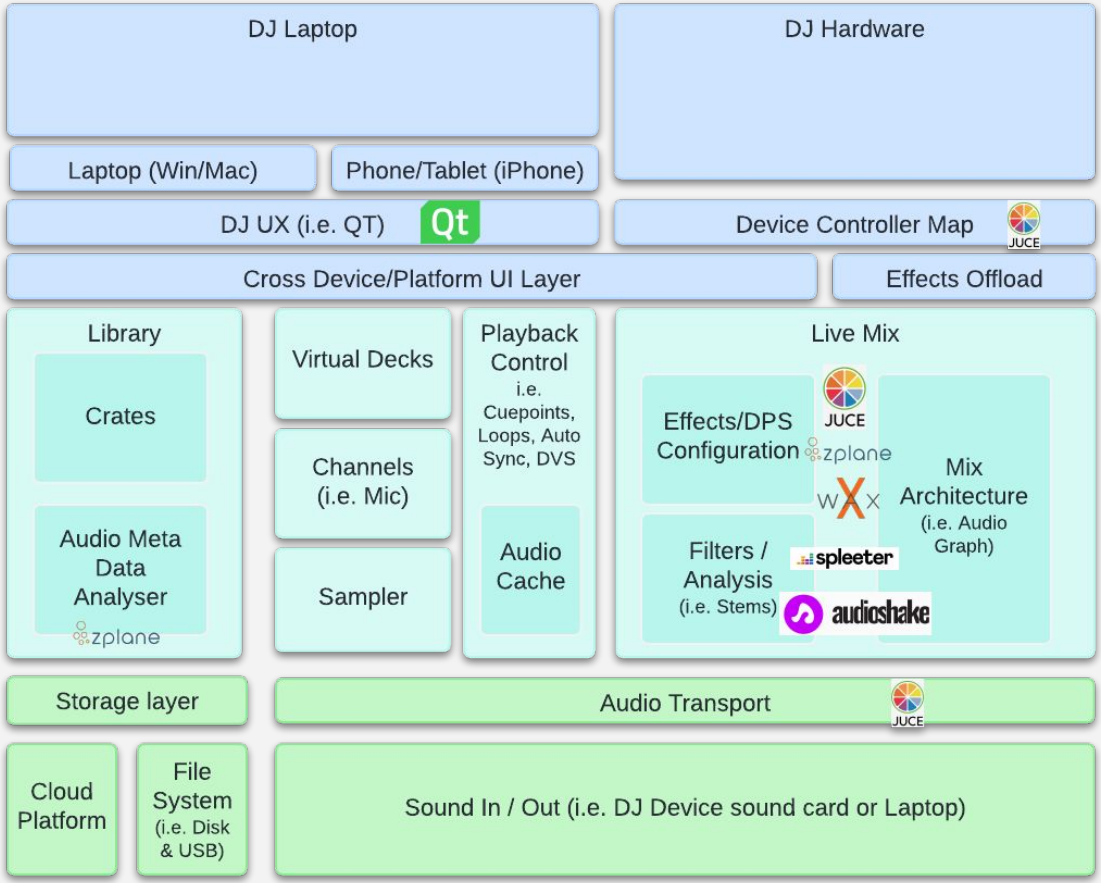
- Identify core components that are pre-built from 3rd parties or that are open source
- Identify the remaining features that can be built in parallel
- Understand dependencies between features and what needs to be tackled first to de risk any unforeseen technical challenges with the chosen approach and technologies
- De risk approach by doing short proof of concept builds around 3rd party components to confirm direction

# Option 1: Proposed team structure

**Team and structure**

- Teams are allocated features to be built with well defined outcomes and cross-component interfaces (this allows the team to internally adapt and build rapidly as long as the consistency of the interface/contract is maintained.
- Utilise cross-functional teams with Developers, Testers, Product and UI Designers, this allows a team to function autonomously around a common goal of releasing often to beta users for feedback and refinement

# Available 3rd Party Modular Components



# Component build tech stack

## Mix Architecture

- Audio Graph: Utilize Juce, a comprehensive library that provides the infrastructure for managing audio processing.
- Events: Juce also facilitates communication between audio graph components and other application parts.

## DSP (Digital Signal Processing)

- Audio Effects: Options include Juce for integration, or licensing from third parties. DSP engineers can also develop custom solutions.
- Resampling and Pitch n Time: Zplane is a notable option, but other resampling technologies are available.
- Stems Separation: Technologies like Spleeter, ZPlane, and Audioshake offer advanced audio stem separation capabilities.
- DVS (Digital Vinyl System): xwax can be used for converting noisemap data to audio position and velocity.

## Transport Engine

- Develop bespoke application logic to manage audio manipulation, such as cue points, loops, and tempo changes, which interacts with mix architecture and audio decoding.

# Component build tech stack _continued

## Device Interaction

- Audio I/O: Juce provides cross-platform handling of audio input and output.
- MIDI/HID Control: Libraries like hidapi, libusb, and rtmidi are available for handling MIDI and HID inputs.
- Device Mapping: Custom development is needed for translating device inputs to software actions, with no out-of-the-box solution fitting all cases.

## User Interface

- UI Framework: Qt or Juce are strong options for building the UI, offering a range of elements and styles suitable for a complex application like DJ software.

## Application Fundamentals

- Miscellaneous components like installers, logging, and networking can use various standard libraries and frameworks, often depending on the specific needs and existing infrastructure.
- Licensing & Authorisation: RLM or custom solutions can manage licensing, with networking and RESTful APIs used for authentication and authorization processes.

# Component build tech stack _continued

## Library Management

- Database and UI: Technologies like SQLite support the management, editing, and persistence of metadata, tracks, and playlists within the application.

## Audio Metadata Analysis

- Beatgrids, BPM, Key Analysis: Zplane and other audio analysis tools can be used.
- Tag Management: Taglib is a solid choice for managing audio file metadata.

# Integrate and build

## Initial Planning (May 1 - May 14, 2024)

- Selection of third-party technologies.
- Evaluation of licenses and compatibility with project goals.
- Setting up contracts/agreements with third-party vendors as needed.

## Sprint Breakdown with Third-Party Integration

- Phase 1: Prototype and Core Development (Sprints 1-8)
- Integration of Juce for Mix Architecture and DSP components.
- Begin implementing Juce-based Audio Graph, ensuring compatibility with planned DSP nodes.
- Integration of Zplane and other third-party libraries for DSP tasks such as resampling and pitch manipulation.
- Consideration of xwax for DVS functionality.
- Assessment of third-party audio file format decoders for audio decoding and caching.
- Implementation of taglib for tag persistence.

# Integrate and build_*continued*

## Phase 2: Iterative Development and Feature Completion (Sprints 9-18)

- Development of the custom Device Mapping definition language, considering no out-of-the-box solution is suitable.
- Further development of UI using either Qt or Juce based on the license evaluation and software requirements.
- Incorporation of RLM for Licensing & Authorization; explore in-house solutions if more suitable.
- Integration of Spleeter, ZPlane, or Audioshake for advanced DSP tasks like Stems.
- Incorporation of SQLite or similar technology for Library features.

## Phase 3: Beta Testing and Refinement (Sprints 19-24)

- Continued integration and testing with Juce for non-real-time communication events within the Mix Architecture.
- Integration and testing of hidapi, libusb, and rtmidi for Device Control.
- User testing for MIDI Learn functionality within Device Mapping.

# Integrate and build_*continued*

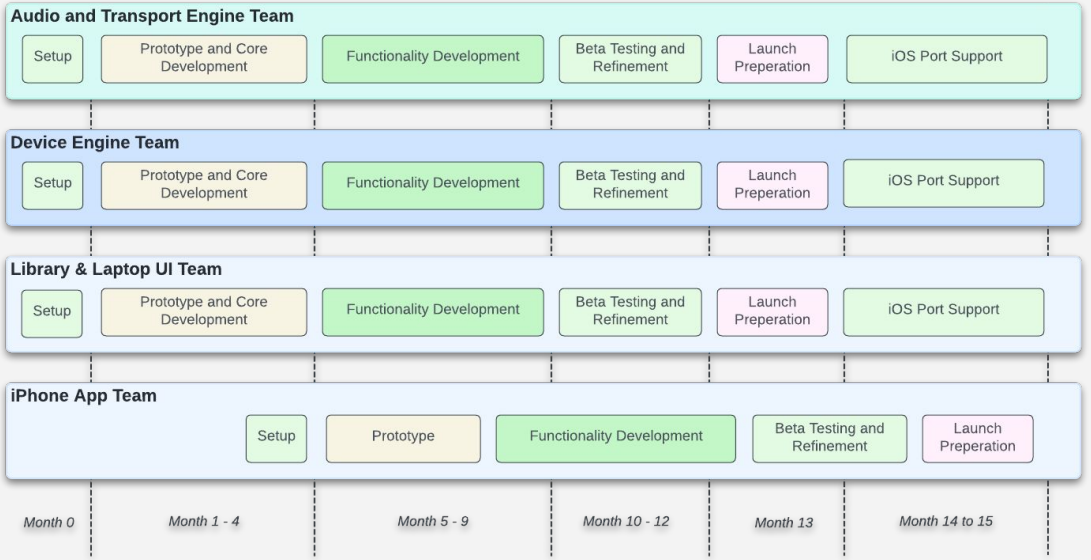
## Final Testing, and Launch Preparation

- Final testing and validation of all integrated third-party components.
- Ensure compliance with third-party licenses in the final product.
- Finalise installers and application fundamentals i.e. logging.

# Effort and timeline assumptions

## Overview

- Suggest 4 teams of 7 to 9 people
- The 4 teams are directed by a Senior Product Lead and a Senior Tech Lead
- Timeline shows establishing core framework and the use of 3rd party components
- Followed by core build, release and test iterations then we suggest a period of open beta and then full commercial release with rapid fast follows for supporting key DJ hardware
- iPhone App will be kicked off after the prototyping phase is concluded for the Laptop target platform



# TimeLine - Laptop App + Core engine

### Month 0: Preliminary Setup *(May 1 - May 14, 2024)*

- All Teams: Initial project setup, including tools, environments, and repositories.
- Team Lead/Project Management: Finalize contracts and licenses with third-party vendors.

### Months 1-4: Prototype and Core Development Phase *(May 15 - August 6, 2024)*

Team 1: Audio and Transport Engine

- Sprint 1-4: Implement and test Juce-based Audio Graph.
- Sprint 5-8: Integrate third-party DSP nodes and basic audio decoding with Juce.

Team 2: Device Engine

- Sprint 1-4: Start PnP device mapping and basic device connectivity using Juce.
- Sprint 5-8: Implement basic USB/MIDI/HID processing with hidapi, libusb, rtmidi.

Team 3: Library & UI

- Sprint 1-4: Begin Library implementation with SQLite; integrate taglib for metadata.
- Sprint 5-8: Start UI development with Qt or Juce, focusing on layout and custom elements.

# TimeLine - Laptop App + Core engine_*continued*

**Months 5-9: Functionality Development Phase** ***(August 7, 2024 - January 14, 2025)***

Team 1: Audio and Transport Engine

- Sprint 9-12: Develop advanced DSP functionalities with Juce and licensed third-party libraries.
- Sprint 13-18: Enhance transport engine to support feature behavior like cue points and loops.

Team 2: Device Engine

- Sprint 9-12: Expand device connectivity; work on user device mappings.
- Sprint 13-18: Refine MIDI/HID Processing; start device mapping definition language.

Team 3: Library & UI

- Sprint 9-12: Extend Library features, enhance searching, sorting, and filtering.
- Sprint 13-18: Further UI development; initiate beta user testing for feedback on layout and usability.

# TimeLine - Laptop App + Core engine_continued

**Months 10-12: Beta Testing and Refinement Phase *(January 15 - April 29, 2025)***

Team 1: Audio and Transport Engine

- Sprint 19-22: Refine DSP effects and audio analysis tools; begin intensive testing.
- Sprint 23-24: Integration with metadata analysis and final optimizations.

Team 2: Device Engine

- Sprint 19-22: Complete device mapping language and user mappings.
- Sprint 23-24: Finalize device control functionalities and testing with real hardware.

Team 3: Library & UI

- Sprint 19-22: Implement user feedback from beta testing into UI enhancements.
- Sprint 23-24: Polish library functionalities and user experience.

# TimeLine - Laptop App + Core engine_continued

### Month 13: Final Testing and Launch Preparation *(April 30 - May 13, 2025)*

- All Teams: Address final beta feedback, bug fixing, and performance optimization.
- Team 1: Finalize any pending issues with audio engine components.
- Team 2: Ensure complete hardware integration and device mapping robustness.
- Team 3: Final UI tweaks and Library stability checks.

### Laptop App Launch *(May 14, 2025)*

- All Core Teams: Participate in launch preparation and execution.
- Marketing & Support: Ramp up communication, release notes, and user guides.

### Cross-Team Collaboration

- Fortnightly Sprint Reviews: To align teams, showcase progress, and integrate components.
- Weekly Technical Leads Meeting: To discuss challenges and dependencies between teams.
- Continuous Integration/Continuous Deployment (CI/CD): Automated builds and tests for immediate feedback on integration.
- Documentation: Ongoing documentation of the development process, API integrations, and third-party library usage.

***NOTE:*** *This high-level work plan requires constant communication and collaboration between the teams. The usage of Agile methodologies will be essential to adapt to changes and feedback throughout the development process. Adjustments to the plan should be expected, and the project manager or scrum master will need to manage the backlog and reprioritise tasks as needed.*

# TimeLine - iOS/iPhone App

### Month 4: Preliminary Setup *(July, 2024)*

- Initial iOS/iPhone project setup, including tools, environments, and repositories.

### Months 5-8: Prototype and Core Development Phase *(August - November, 2024)*

Team 4: iPhone App Team

- Sprint 1-4: Build and test cross platform components for iOS, design and test touch based UX like virtual DJ decks.
- Sprint 5-8: Start UI development with Qt or Juce, focusing on layout and custom elements.

### Months 9-13: Functionality Development Phase *(December, 2024 - April, 2025)*

Team 4: iPhone App Team

- Sprint 9-12: Extend Library features, enhance searching, sorting, and filtering.
- Sprint 13-18: Further UI development; initiate beta user testing for feedback on layout and usability *adjustments to the plan should be expected, and the project manager or scrum master will need to manage the backlog and reprioritize tasks as needed.*

# TimeLine - iOS/iPhone App_*continued*

### Months 13-14: Beta Testing and Refinement Phase *(May - June, 2025)*

Team 1 to 3: Support the iOS port of the cross platform components

Team 4: iPhone App Team

- Sprint 19-22: Implement user feedback from beta testing into UI enhancements.
- Sprint 23-24: Polish library iOS performance and user experience.

### Month 15: Final Testing and Launch Preparation *(July, 2025)*

- All Teams: Address final beta feedback, bug fixing, and performance optimization.
- Team 1: Finalize any pending issues with audio engine components.
- Team 2: Ensure complete hardware integration and device mapping robustness.
- Team 3: Final Library stability checks on iOS.
- Team 4: Final UI tweaks

### iPhone App Launch *(July 30, 2025)*

- All Teams: Participate in launch preparation and execution.
- Marketing & Support: Ramp up communication, release notes, and user guides.

# Team topology, skills and costs

**Teams:**

- Audio and Transport Engine (7-9 people)
  - Tech Lead, Tech Product Lead, Audio/DSP Engineers, App Engineers, QA
- Device Engine (7-9 people)
  - Tech Lead, Tech Product Lead, Senior Engineers, App Engineers, QA
- Library & Laptop UI (7-9 people)
  - Product & Design Lead, Tech Lead, App Engineers, DevOps, QA
- iOS/Phone App (9 people)
  - Product & Design Lead, Tech Lead, App Engineers, DevOps, QA

Team budget: $700k to $900kNZD a year based on NZ sourced skills, US would cost another 30%

Team leadership: Each Lead role may be allocated across 2 teams if appropriate, CTO and CPO will provide general leadership across the 4 teams

Build budget of $7M to $9M NZD includes:

- Staff and contractors in the teams (18 to 22 months)
- 3rd party software licensing and components
- Excludes sales team and executive leadership salaries

# Option 2: Adjacent competitor enters DJ software category

Current audio tool/streamer platform grows feature set into DJ space or new venture acquires an existing product that has not integrated yet with DJ devices and has potentially just focussed on iOS and Android Apps

- Extend to support desktop deployments on Windows and Apple mac
- Build and add a DJ Device controller layer for the most popular models
- Prerequisites:
  - Original platform has been constructed well and has the ability to be made cross-platform without rewriting more than 30% of the code base
  - External controller MIDI/HID interface can be easily incorporated into the products code base
  - Initial product is respected in market (not important if the acquisition is not widely publicised)
- Impact on timeline:
  - Possible to shorten timeline to 9 months or less of core build and 3 months of open beta testing and refinement

# Adjacent Audio Software Markets

**Three key opportunities exist:**

Adjacent DJ Software with strong core features, examples:

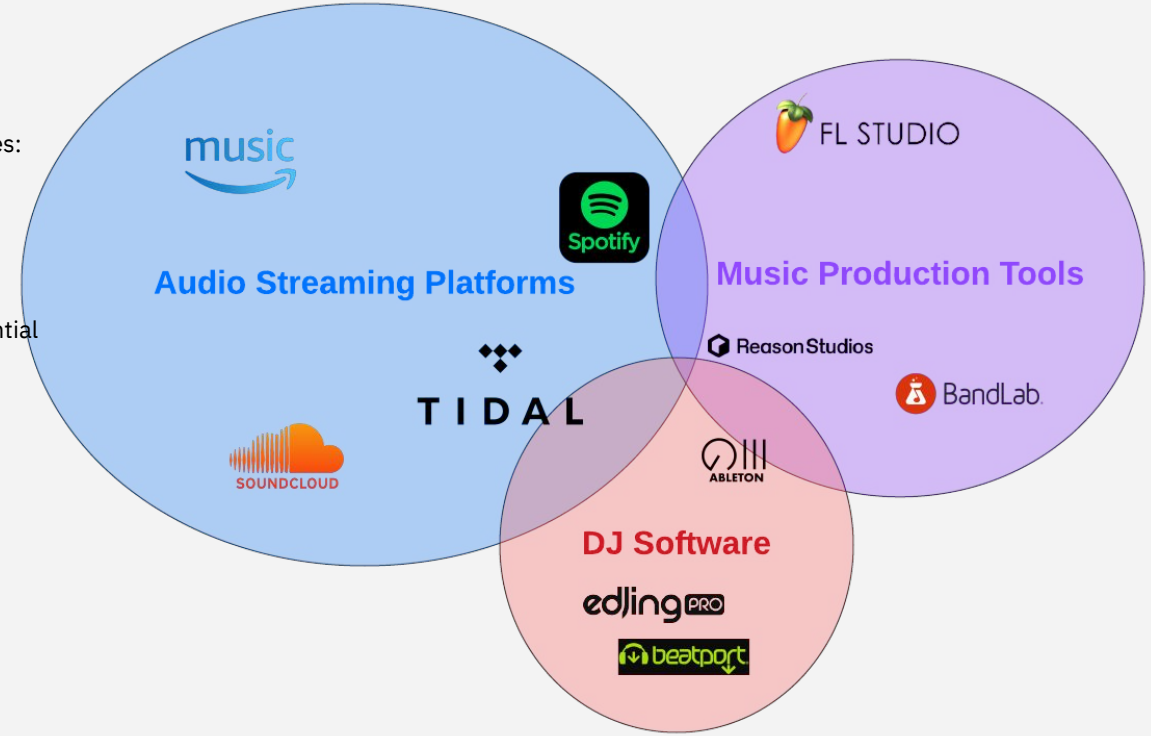
- Ableton Live
- Edjing (MWM)
- DJ Studio 2.0
- Beatport DJ App

Existing streaming platforms that have access to substantial music catalogs, examples:

- Spotify
- Tidal
- Soundcloud
- Amazon Music

Music production platforms and tools, examples:

- FL Studio
- Bandlab
- Reason Studios
- Dolby



# Summary conclusions

- Given the assumptions, domain knowledge, requisite skills and capital, there does not appear to be any unique or novel constraints to a competitor building a software product to compete with Serato

- A competitor entering the market will have several advantages including
  - No technology legacy codebase or compatibility issues
  - Existing product category defined, technology ecosystem a clear
  - Vastly reduced product R and D cycle
  - Availability of commercial and open source building block components
  - Potentially ecosystem and platform effects for distribution and management i.e App stores models

- Moreover, software engineering in 2024 offers a fresh competitor significant advantages through modern hardware software engineering  tools, practices and processes

# Summary conclusions_*continued*

- Given the conceptual model, architecture, required features, and assumptions the time to market could be achieved via the following options

  - **Option 1 - Integrate and build**
    18 month time to market (including beta programme) on 3 x 7 person squads utilising open source and commercial components
  - **Option 2: Adjacent competitor enters DJ software category**
    12 month time to market (including beta programme) based on existing product/platform components and skills

NOTE: These estimates are high level feature and team based estimates based on industry standards.

clearpoint.

# Thank you.

If you have any questions or feedback please contact:
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# About ClearPoint

# We help clients

## 01

**Create a compelling digital proposition**

Create and build a unique and compelling value proposition for a digital product or service that aligns with your target customers needs and business objectives.

## 02

**Improve customer and staff experiences**

Enhance and optimise the overall experience of end customers and staff through understanding users needs and building out supporting processes and tools that deliver business value.

## 03

**Accelerate time to market and delivery speed**

Implement processes and tools to speed up the development, testing and deployment of a digital product or service, in order to bring it to market faster and more efficiently.

## 04

**Modernise technology stacks for scalability and security**

Update and modernise technology stack to improve scalability and security by understanding which areas to address and implementing the right approach.

## 05

**Optimise organisational digital maturity and efficiency**

Improve the overall maturity and efficiency of your organisation, by assessing and optimizing key areas such as people, processes, technology, and data.

## 06

**Empower data-driven decision making**

Leverage data and analytics to drive better decision making and drive business outcomes through implementing a robust data strategy supported by modern data platforms.

OUR STORY

# Proudly New Zealand owned and operated

- Founded in 2007
- 190+ staff
- Locations across New Zealand and Australia