



# Data Clean Rooms

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# Data Clean Room Overview



As marketers are faced with more data from disparate sources, and privacy and compliance are increasingly at the forefront of the customer, Clean rooms are one tool that can help to aggregate, normalize and find connections and intersections to activate on the data.

# What are They?

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Data clean rooms are privacy-based technologies that allow different companies to aggregate and anonymize their first-party data sets in a privacy compliant way, that do not expose individual user IDs or PII (Personally Identifiable Information) to each other. Unlike other types of data partnerships whereby companies directly exchange user-level data such as cookie IDs, device IDs or IDs from hashed email lists, data clean rooms match the first party data provided by brands and advertisers together but prevent user level data from being accessed outside of the clean room.

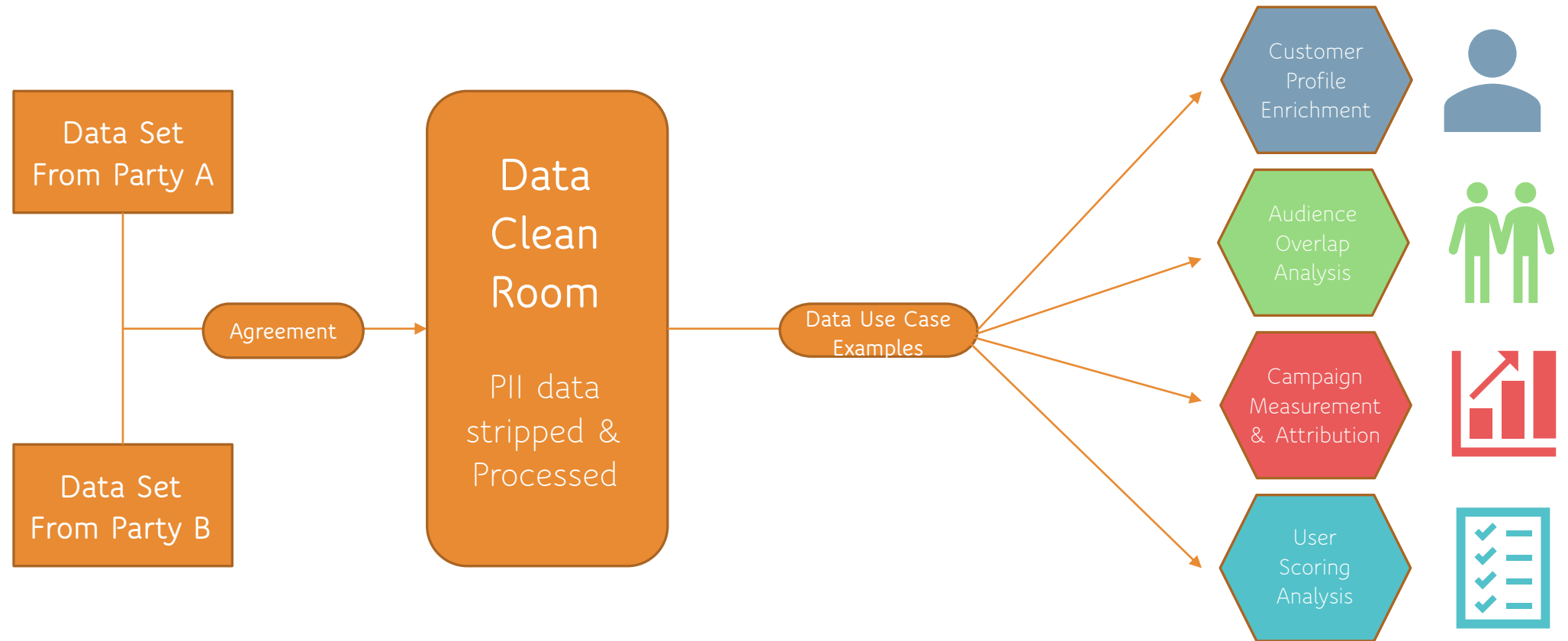
Forrester Definition: A secure, privacy-protecting environment where two or more parties can share sensitive enterprise data, including customer data, for various collaborative marketing, product insights, sales, and other use cases.

# Key Concepts of Data Clean Rooms

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1. Data from any of the parties involved cannot be viewed or shared directly between partners
2. The data you bring into the data clean room must stay with the owner
3. Data clean room is **not** a user-matching solution. Unlike solutions brought by the likes of Liveramp, Data clean rooms do not try to match IDs. It simply shows you the intersect of 2 datasets
4. User ID's that gets put into the data clean room is anonymized - only the insight and total user count can be seen
5. To ensure you cannot narrow down on user ID's, data clean rooms will have rules that will disallow for re-identification by having a threshold or level of granularity that must be met before the insights can be surfaced

# How it Works: Match user-level data without sharing any PII







# Marketing Use Case Examples

# Customer Profile Enrichment

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To develop richer profiles on customers, companies can layer on additional data to understand needs and interests to provide better service.

Clean rooms allow brands to get rich and strategic insights. i.e - show this customer content A, not content B, or this customer is likely to upgrade or add on with offer C. This can be gleaned without requiring the brand to onboard and merge their CRM database within the algorithm.

Brands enter the clean room and append customer matched data. With this, the brand can segment the customers into interest groups for personalized experiences.



# Audience Overlap Analysis

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Brands can determine customers they have in common with others for marketing initiatives. CRM data is fully anonymized, matched and then each brand receives a list of IDs that match to their own customers.

Example: an airline and a hotel. The airline would receive a list of their customers that they can send a promotion to (co-marketing) about the hotel.

# Campaign Measurement and Attribution

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If a brand purchases impressions from a publisher, they want to understand if this generates results. The Publisher uploads a list of fully anonymized users who were presented with the brand's ads (which they know from their ad server). The Brand also uploads a list of fully anonymized users who landed on the campaign landing page. The clean room then analyzes the overlap and presents it to the marketer, who can make an informed decision on the campaign efficacy.

Typically, if publishers are leveraging cleanrooms for this purpose, they're creating mini walled gardens.



# User Score Analysis

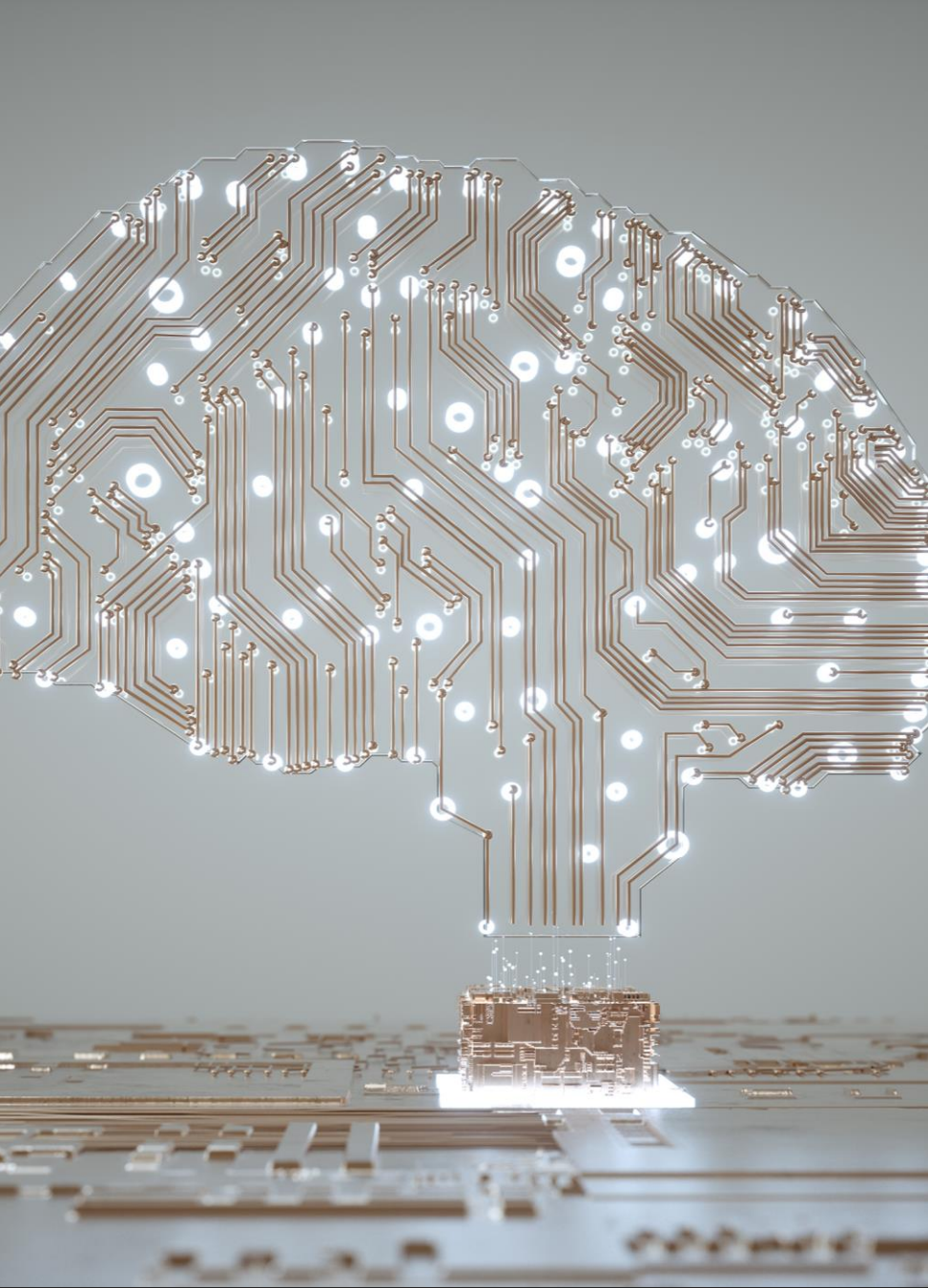
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Brands can interact in a transactional fashion, leveraging customer data and attributes to score them on a propensity to buy and lifetime value basis.

Brand A would upload its anonymized CRM data into a clean room, and Brand B would run its algorithm against the data. The customers are scored, commissions can be calculated, and Brand B presents Brand A with an estimate. If they decide to move forward with a joint marketing initiative, Brand A will offer Brand B's products to its customers.





# Benefits

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At the very end of the data clean room journey, aggregated data outputs enable marketers to:

- Build more relevant audiences
- Optimize their customer experience and A/B testing
- Execute cross platform planning and attribution
- Perform reach and frequency measurement
- Run deeper campaign analysis



# Various Cleanroom Solutions

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# Level Setting: Walled Gardens vs Independents

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Walled gardens were first introduced by Google, Amazon, and Meta (Facebook) to safely commercialize their 1st-party data, while continuing to monetize audience data.

As an example, Ad Data Hub (Google) allows advertisers to load their first party data into the Google Ad Cloud to improve targeting and attributions but does not pass information back to enhance the advertiser's data. Likewise, Amazon's cloud based clean room can only be used for analytics or within Amazon's own DSP.

Using an independent clean room, advertisers can load their data to the secure cloud along with any supply-side or other data partners and sync their audiences. The advertiser is able to use an open web DSP and both the advertiser and sell-side data partner in the clean room are able to enhance their first-party data sets. Some of the major tech companies in this area are Snowflake, with LiveRamp's Safe Haven, TransUnion-owned Neustar, Habu and startups, including InfoSum.

# Walled Gardens

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Walled gardens were first introduced by Google, Amazon, and Meta (Facebook) to safely commercialize their 1st-party data, and capture ad spend. As an example, Ad Data Hub (Google) allows advertisers to load their first party data into the Google Ad Cloud to improve targeting and attributions but does not pass information back to enhance the advertiser's data. Likewise, Amazon's cloud based clean room can only be used for analytics or within Amazon's own DSP.



Supporting 1<sup>st</sup> party data set enrichment with event level data



Offering raw materials for analysis (requires team of data scientists, analysts and engineers).  
Rigid Architecture  
Lack of cross platform ability to generate actionable data  
Strict Query Functionality

# Independents- Enterprise/Cloud

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Primarily legacy businesses operating in adjacent industries like marketing applications or cloud data storage, offering data collaboration mechanisms for gathering signals in a regulatory compliant way. This group includes providers such as Epsilon, Measured, BlueConic, and Merkle.



Architectural Flexibility  
Bespoke governance controls over data type and level of analysis



Limited access to walled garden data  
Narrow Partner ecosystem  
Limited downstream integrations  
Leverages existing CDP/CEP (Complex event processing) functionality, which could lead to data issues

# Independents- Pure Players

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Typically younger, small to mid-scale data clean room providers, among which are Bitstrapped, Hobu, Harbr, InfoSum, and Decentriq, as well as more enterprise-focused tools such as Snowflake.



## Architectural Flexibility

Leverages existing data piping and storage infrastructure  
Access to an ecosystem of integrated partners



## Limited 1<sup>st</sup> party data granularity

Often relies on 3<sup>rd</sup> party infrastructure for data ingestion  
Narrow pool of downstream integration options

# Mobile Measurement Partner (MMP)

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Ideally, an MMP is a trusted and unbiased player that enables all available user-level data to be leveraged using customers' own business logic, and then consumed via aggregated and actionable insights.



Cornered Resource – user level data and cross channel data granularity  
Realtime conversion data  
Comprehensive analytics built for mobile app business logic  
Flexible integration options



Limited data granularity and query related actions could be imposed by SRNs  
Lack of existing CDP architecture



# Choosing the right Clean Room

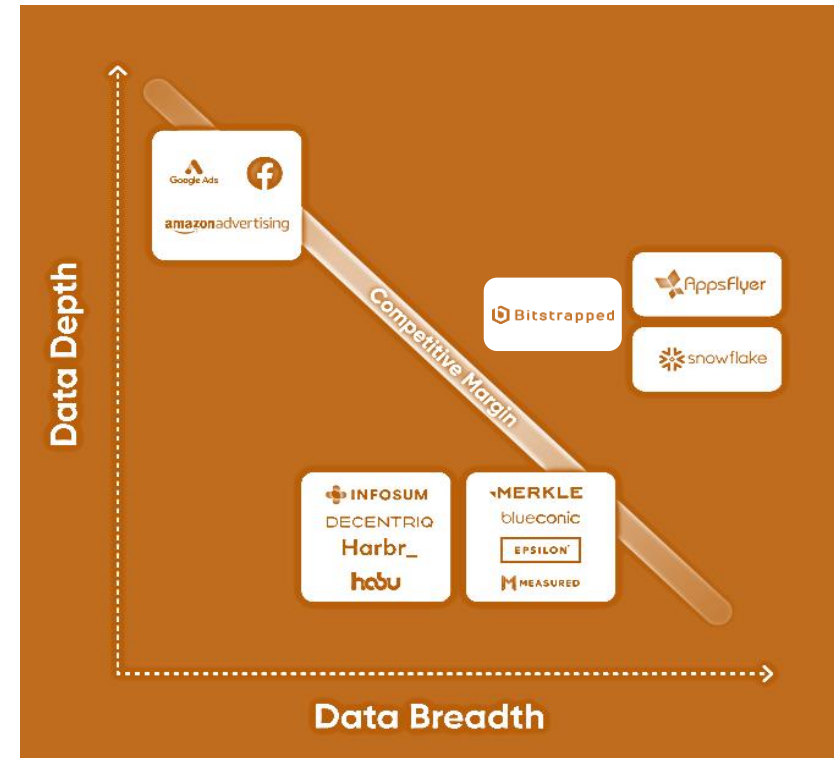
Two main factors that should be considered:

The volume and quality of the data - referred to as depth

And the variety of received data - referred to as breadth

When considering a data clean room there are several best practices you can follow to ensure you get the most value possible:

1. Be sure to factor in your main channel (be it mobile, app, or web), business size, marketing needs, data structure, and internal resources.
2. Begin designing your data clean room with your consumers in mind. Not just for the present, but for the future. The best data clean rooms are set up to anticipate shifts in consumer behavior.
3. Start testing with a live audience. Analyzing consumer behavior in real time and getting actionable insights is nothing short of invaluable.



# Performance across types of Clean Rooms

	Data Granularity	Ingestion	Connect & Enrich	Query & Actions
Walled Gardens	<ul style="list-style-type: none"> <li>- Unrivaled access to native ecosystem data</li> <li>- No Cross Channel Access</li> </ul>	<ul style="list-style-type: none"> <li>- Ads data hub built on top of BigQuery. FB approach unclear</li> <li>- Lacks scalability</li> </ul>	<ul style="list-style-type: none"> <li>- Unrivaled depth but lacks breadth (no cross channel enrichment)</li> </ul>	<ul style="list-style-type: none"> <li>- Requires data scientist/engineer</li> <li>- Limited flexibility</li> </ul>
Enterprise/Cloud	<ul style="list-style-type: none"> <li>- Maximum flexibility</li> <li>- No Access to Walled Garden data</li> </ul>	<ul style="list-style-type: none"> <li>- Full distributed (No copying of data into one place)</li> <li>- Leverages existing data piping and storage infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>- Access to rich ecosystem of integrated partners</li> </ul>	<ul style="list-style-type: none"> <li>- Access to rich ecosystem of integrated partners</li> </ul>
Pure-Play	<ul style="list-style-type: none"> <li>- Maximum flexibility</li> <li>- No Access to Walled Garden data</li> </ul>	<ul style="list-style-type: none"> <li>- Reliant on 3<sup>rd</sup> party infrastructure (CDP's, cloud storage, etc) for data ingestion</li> <li>- Data storage may be distributed</li> </ul>	<ul style="list-style-type: none"> <li>- Complete flexibility to users</li> <li>- Small partner ecosystem</li> <li>- Less sophisticated compute/data manipulation tools</li> </ul>	<ul style="list-style-type: none"> <li>- Targeted at business users/marketers</li> <li>- Limited downstream integrations</li> </ul>
Independent Marketing Incumbents	<ul style="list-style-type: none"> <li>- Maximum flexibility</li> <li>- No Access to Walled Garden data</li> </ul>	<ul style="list-style-type: none"> <li>- Leverages existing CDP/CEP functionality; potential movement of data issues</li> </ul>	<ul style="list-style-type: none"> <li>- Complete flexibility to users</li> <li>- Small partner ecosystem</li> <li>- Less sophisticated compute/data manipulation tools</li> </ul>	<ul style="list-style-type: none"> <li>- Targeted at business users/marketers</li> <li>- Limited downstream integrations</li> </ul>
Mobile Measurement Partner (MMP)	<ul style="list-style-type: none"> <li>- User level &amp; cross channel (cornered resource)</li> <li>- Restrictions imposed by SRNs</li> </ul>	<ul style="list-style-type: none"> <li>- Conversion data ingested at the source (DSP's, in-App SDK) and real time</li> <li>- No existing CDP architecture</li> </ul>	<ul style="list-style-type: none"> <li>- Strong analytics features via inhouse and via rich partner eco system</li> </ul>	<ul style="list-style-type: none"> <li>- Flexible integration</li> <li>- Targeted at business users/marketers</li> <li>- Restrictions imposed by SRNs</li> </ul>

# Final Considerations

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1. Data clean rooms can be costly. Walled garden providers offer alternatives, but logistical and operational hurdles of working with these platforms can put a strain on all parties. Most of these data clean rooms only work for a single platform (e.g., Google or Facebook) and cannot be combined with other data clean rooms.
2. The success of data clean rooms is rooted in data being shared. Not all advertisers/brands are quick to divulge detailed transactional data, mainly due to the misconception of potential privacy risks. Limited information in, means limited information out, resulting in rough measurement at best.
3. Universal standards for implementation are yet to be determined. That means that pooling data that exists in multiple formats and the prep work that goes into aggregating it – could be time/resource intensive.
4. Ensure interoperability when thinking about integrating MarTech solutions, especially data clean rooms. Partnerships and data sharing become extremely difficult when having to merge data from disparate sources that do not easily connect
5. Remember that user-level data is still available in some instances (e.g. Android devices, consenting iOS users), which could alleviate at least some of the urgency to implement a data clean room solution. Start with an overall data strategy and building a first party data pool as the priority.

# How and Where to Start?

'A data clean room isn't just another MarTech app. It's a whole new working environment that enhances privacy across your entire data partner ecosystem and technology stack.'

- Michael Schoen, EVP Marketing Solutions, Neustar

1. Have a mapped out data and analytics strategy, with buy in and understanding across the key stakeholders
  - This includes deep understanding of privacy framework, identity solutions, analytics and attribution methods/models
2. Evaluate needs and use cases. Prioritize to line up to drive value for your business.
  - Use cases and ability to action will be dependent on resources, available data, partners, tech implemented, etc
3. Look for a clean room partner that can deliver on the use cases for your business
  - Do your due diligence in evaluating different partners and their capabilities
4. Understand the resourcing, data health, volume, etc required to generate value
  - There will be resources needed internally; data scientists, analytics, and potentially others
5. Set up a framework for determining efficacy, including key milestones and timelines
  - Set the KPIs, be realistic in terms of timelines to achieve them.
6. This process takes time and is important to make the right decisions along the way. Organizations should plan for 6-18 months for full implementations.
  - Timelines are dependent on partner, data complexity and use cases.



# Appendix



# Key Areas of Consideration

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Think about the following considerations as you research your options:

**Usability** - Don't lower your expectations. You should be able to produce new insights quickly, and have your team building insights, not managing data.

**Governance** - Pay special attention to the levers provided for you to control access and authorize queries, as well as the mechanisms in place for you to verify compliance.

**Interoperability** - You should look for a solution that integrates easily with other clean rooms and other solutions in your marketing stack, especially identity resolution.

**Transparency** - Make sure you understand all the privacy measures that are available in the clean room you're considering, and how exactly the vendor implemented those measures.

**Activation** - You want to use your new insights without delay. Pick a data clean room with activation capabilities built-in so that PII doesn't get compromised.

**Availability** - The right data clean room partner can open new doors for you. To get a head start, you can select a solution that comes with an extended marketplace of vetted data partners.

**Identity** - If you don't use some form of identity graph to facilitate cross-party data matching, you won't find very much in common with your data partners. The option of adding an identity graph should be one of the key criteria when choosing a clean room vendor.

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