Best practices for onboarding new technologies

Use these principles to improve the adoption of new technology

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1. Welcome

Technology is transforming the business of investing, empowering a reorganization of investment decision-making by unlocking new insights about past performance, current positioning and future trajectories. In the years ahead, investing will be powered by new, alternative forms of data and analytics, augmenting investors' understanding of their own portfolios vis-a-vis their goals and investable opportunities. Investors of all stripes—wealth managers, asset managers and institutional investors—should be looking hard at how they'll be incorporating new, advanced technologies into their business models.

The majority of professional investors, however, are struggling to integrate advanced technologies into their decision-making and operations (see Monk and Rook, 2020). Instead of embracing new tech, they tend to cling to familiar-but-deficient tools, such as Microsoft Excel, that entrench them in time-wasting and error-prone ways of operating. But things needn't be this way: the onboarding and utilization of new technologies doesn't have to be anxiety-inducing or full of uncertainties.

The purpose of this Addepar Research Brief (ARB) is to show professional investors how adopting new tech can be made easier. Using evidence gleaned from the Addepar platform, we've developed a framework to help investors optimize their onboarding experience—not just with Addepar but with new technologies generally. Here, we distill a decade's worth of customer onboarding insights and use them to reveal what works and doesn't work for investors looking to change their tech stack.

This is our framework for achieving more convenient and successful onboardings for customers of investment-related technology including single family offices, RIAs and endowments, which we hope will be used for technological empowerment.

2. NTK

Here is the "need-to-know" from this ARB:

- **Approach:** In producing this ARB, we analyzed 10+ years of Addepar's customer success data to identify common challenges to integrating new technology. From that analysis, we harvested hypotheses based on universal best practices. We then explored those hypotheses in light of 11 case studies that emerged from the data.

- **Common Problems:** Our research has identified the most frequent onboarding and utilization problems that customers face, and it's recommended investors begin planning for how to address these problems before beginning a new implementation.

- **Generalizable Solutions:** The investors who are most successful in tech onboarding tend to have four key characteristics: **1)** organizational readiness; **2)** defined data model; **3)** understanding of what data feeds are needed; and **4)** user education for those who'll be applying the new technology. We provide a checklist below based on these characteristics.

3. Significance

The digital infrastructure of an investment organization is a key driver of the quality of its investment decisions. An investor's technology should ideally deliver three functions:

1. **Context:** Technology should help to organize an investor's data—from traditional portfolio metrics to alternative and ESG data—in such a way that it conveys key properties of the data (its provenance, quality, who's responsible for it, etc.) to those who use it for decision-making. Advanced investment tech doesn't just store numbers; it also gives

users a sense of what those numbers mean, and what might be done with them to improve portfolio returns.

2. **Insight:** Technology should provide decision-useful analysis of past and present investments across a range of themes and perspectives, such as performance, liquidity, risk, ESG impact and cost.

3. **Intelligence:** Technology should provide comprehensive and reliable models of the future that professional investors can then rely on to guide a portfolio towards its goals.

Technology shouldn't be seen as simply a middle- or back-office resource for reporting on an investor's activities; it should be seen as a path to comparative advantage, which can distinguish a firm from its competition. As such, proper onboarding and application of technology is a critical component of investment management.

4. Context

Over the long course of our research on investment technology, we've identified several challenges that all investors face whenever they onboard new tech. In fact, Addepar researchers Ashby Monk and Dane Rook wrote an entire book on the topic, which highlighted the following speedbumps:

- **Process Inertia:** Most investment organizations are very process-centric (as they should be: it's part of good governance!), but most of these processes are intended to enforce consistency, i.e., to resist change. While generally beneficial, this inertia-by-design can make it difficult to tweak processes to accommodate new tech. The result: some short-term efficiency may have to be sacrificed to reap the long-term advantages that new tech can bring.

- **Siloed, Unmapped Data:** Figuring out what data the organization has—and where in the organization it resides—can be challenging. Investment data in many organizations is often heavily siloed: it may exist in one part of the organization yet be invisible or inaccessible to other parts. Rarely is there some document or other resource that states exactly where each of the organization's datasets reside, even mission-critical datasets. Yet those datasets are the fuel on which new

technology runs, and utilizing more of them means more horsepower can be extracted from tech upgrades.

- **Data Anarchy:** Even when investment organizations do a decent job of data mapping, it doesn't automatically mean their data is well governed—that is, that proper controls are in place to ensure data quality. And please know that data quality itself is like a platypus: a difficult-to-classify mix of being error-free, transparent, not outdated, sufficiently granular and appropriately structured.

- **Historical Quandaries:** Given that much of an investment organization's data may be siloed, poorly mapped and not well governed, there's a question of how much of it to make available to any new technology being onboarded—since it can be costly (in time, mostly) to find, clean and reformat that data. Having larger volumes of historical data to load into a new technology often will make that technology perform better, but the upside of these insights must be balanced against the downside of data prep.

- **Evolution over Revolution:** Henry Ford once said, "If I had asked people what they wanted, they would have said faster horses." This applies to many investment organizations: when asked to innovate, they express a tendency to favor small improvements from familiar things over much bigger improvements from unfamiliar ones. Jumping to a new technology, however, is often more of a revolution than an evolution—swapping horseshoes for rubber. Embracing the revolutionary capacity of new technologies can be key to bettering an organization's existing capabilities, and also in giving it new ones.

- **Extensibility:** Investment organizations often adopt a standardized view of the world, splitting things up into a fixed number of neat buckets such as industries and asset classes. But financial innovation (in both strategies and products) can frustrate these attempts at standardization. For example, cryptocurrencies—are they really currencies, just another alternative asset, a hedging instrument or something else? A usual workaround that many organizations take is to extend their classification schemes in ad hoc ways, often lumping many

unrelated things into an "other" category. Yet that hack isn't ideal for getting the most out of new technologies, and it can be far better to embrace ways of looking at things that more elegantly allow for extensibility, even if that means accepting some added complexity.

- **Narrow Costing:** Many investment organizations conducting cost-benefit analysis on a new technology may take a fairly narrow view of who will benefit—focusing on middle- or back-office functions. Factor in the more indirect savings that may accrue, such as those from reducing the fees paid to external managers (e.g., if new software improves their ability to weed out underperforming managers).

The above list of challenges isn't exhaustive—its point is to draw attention to the chief struggles we've seen investors face over the course of 10+ years of working with them on issues related to onboarding new tech. Noticing these struggles, and studying them extensively, has given us a fair idea of the most workable paths to overcoming them.

5. Approach

The foregoing challenges in tech onboarding apply to professional investors and their firms generally. But we were keen to see what specific remedies to them might be learned from the experiences (and expertise) of Addepar's own clients, in particular, those who described their onboarding with Addepar as successful. By closely examining the characteristics of these successful onboarders, we were able to extract a series of candidate best practices for new tech onboarding. We went on to probe these hypotheses further, by studying how well they held up in 11 case studies. The result is an onboarding framework—a recommended recipe, if you will—for excellence in onboarding. We cover that framework below. But first it's essential to understand the subject composition of our case studies.

The studies themselves were developed from a series of one-on-one interviews, conducted in April and May of 2022. Those interviews were with:

- Nine (9) single family offices (SFOs) who represent the spectrum of Addepar's clients in terms of geography, size, firm complexity and portfolio composition.

- Two (2) external consulting firms who are experts at helping clients adopt Addepar's platform and whose primary business is to advise clients on the process of technology implementation.

- We also extensively interviewed Addepar employees about the onboarding process, gleaning additional insights about potential frictions and solutions.

- We did not focus our research on private banks or large RIAs, which generally have hundreds or thousands of their own clients and many unique challenges. We left these complex entities for subsequent projects.

The goal of the interviews and case studies was to learn firsthand about clients' onboarding journeys—what works as well as what doesn't. In our view, the experience of Addepar clients is representative of the broader challenges faced by all investors. Addepar offers a robust software and data platform, one that serves professional wealth, institutional investment and asset management firms. Addepar's platform has multiple components that deliver context, insight and intelligence. It also integrates with more than 100 software, data and services partners, which means the qualitative insights that it can deliver researchers are rich indeed.

6. Findings

We found that onboarding success was greatly improved by ensuring the below criteria are met:

Organization

A powerful new technology has the potential to change how an organization operates. As one interviewee said, "The Addepar platform is an invasive system that touches all core processes." As this implies, successful clients often need to be ready for broader organizational changes, which are encapsulated in the following practical policies:

- **Avoid Seasonality:** Every investment organization has demands on its time during different stages of the year. Addepar clients with a successful onboarding were happy to have launched their tech projects in a slow period for the organization. For example, a family office

attempting to onboard new tech during tax reporting season might encounter more difficulty than if it had done so on quieter pages of the calendar.

- **Define Authorities:** From the very beginning of implementation, it's critical to clearly identify which team members will be responsible for managing the various elements of the onboarding process, as well as those team members who'll later become "super users" of the new technology (i.e., those responsible for day-to-day operation and maintenance). We also find that having a strong leader and change agent leading new tech implementation is very useful.

- **Establish Governance:** It's important to establish rules around the processes that must be followed to change data, create new attributes or tag anything in the system. Put differently, data that's used by or within the new technology must be governed. This data governance is necessary for consistency and reliability of the technology's outputs.

- **Fill Gaps:** Although adopters of new technology typically hope for an immediate increase in organizational efficiency, that's not always the case. New technologies often demand new skills, and successful onboarders often benefit from the help of consultants. This help can come in multiple forms, for example, assistance with change management or maintenance and daily operation of a new system.

Architecture

Generally, having a clear schematic of the target data architecture will dramatically improve the likelihood of successful tech onboarding. As one interviewee noted, "Make sure you have all of your ducks in order prior to getting your data into the system; because once it is in there, it will be a lot harder to unravel later." In our experience, this means creating a series of "maps", which can be thought of as input maps (data) and output maps (reports):

- **Data Maps:** Investment organizations should begin the onboarding process with an informed understanding of where all of their datasets actually reside (disparate and siloed though they may be). This includes knowing what data corresponds to LLCs, trusts, complex ownerships

among family members, and so on—as well as the structures of those entities themselves. Investors need a complete picture of all online and offline assets and data. One SFO that had rushed to onboard without appreciating the importance of first articulating a clear ownership structure said it was now their number one recommendation for prospects on reference calls.

- **Reporting Maps:** Onboarders of new tech should identify all of the consumers of their various datasets and data streams and how those consumers need that data reported. At what level do clients want to see performance? Is it at the level of a family member, a manager or some other entity? As one interviewee said, "Do not start building until you know where you want to end up; only then will you know what data and custom attributes for that data will be required." The fact that Addepar has 140 custom attributes for tagging assets reinforced the need to plan ahead among our interviewees.

- **Unravel Complexity:** The purpose of mapping inputs and outputs of a technology is to anticipate any significant atypicalities or complexities associated with a given user's intended use patterns. An upside of many advanced technologies is that they can accommodate a variety of non-standard, even off-label use cases. It's certainly best to understand those cases prior to onboarding so they can be addressed in the cleanest way possible.

Ingesting Data

The success of any investment technology depends on the integrity of the data ingestion process, which refers to securing, onboarding, cleaning, validating and unifying the investment data, such that it's ultimately usable (and useful!) for decision-making, reporting or some other investment-relevant function. As it pertains to data ingestion, we found three key areas that require special attention during onboarding:

- **Feeds:** Planning for all data feeds and anticipating the time to enable them is important. It's likely that data coming from external entities such as banks or custodians may need to be routed through APIs or other automated pathways. Setting up such data piping can be a lengthy

process, possibly taking weeks or months, and may require significant paperwork and approvals across multiple parties. Our research suggests that it's a best practice to prioritize this setup as early on in the onboarding process as is feasible.

- **Validations:** In the later stages of onboarding, data validation and stabilization—the processes that ensure data is being properly loaded into and used by a new technology—can take considerable time. The lengthiness of this testing period which may be iterative should be accounted for on the implementation calendar.

- **Historicals:** A vital choice in any tech onboarding is what amount of historical data to port into the new technology. This question isn't simply a matter of a number of years or gigabytes—the state of the historical data is as much a consideration as its volume (e.g., does the data currently only exist in paper form, or in oddly organized file structures, or is it likely to contain errors?). Figuring out the question of how much historical data is a question that's best answered early on in the onboarding process.

Education

Proactive training of users, both at point of onboarding and recurrently thereafter, on the new technology is decidedly a key ingredient in how successful onboarding ultimately is. Users, and those responsible for training them, should begin learning about the new technology early—well before they're called on to use it in their daily activities. This early training can be helpful in identifying ways to improve the implementation plan, and possibly reconfigure things to better accommodate end users. Early education is thus a pragmatic way to surface unknowns. One SFO client observed, "Addepar is so dramatically different from what firms are used to, and going in you simply don't know what you don't know." Two specific lessons on how to administer user education emerged in our research:

- **Make Time To Train:** All users of a new technology must prioritize completion of training, which takes some time, hence why seasonality is so important to onboarding success. Users sometimes don't appreciate

the flexibility and potential power of a new technology until getting deep into formal training modules.

- **Learn From Peers:** The best resource for users to better understand a new technology is often other users, even if they come from outside the organization engaged in onboarding. It can be valuable to have a technology provider that is willing to put users at different organizations in touch with one another, especially from organizations that share similar characteristics and use cases.

7. The ARB-itrage

It's been our intention through this ARB to support investors as they embark on their education journey by highlighting some key areas of inquiry and hooks on which to hang new technologies. In order to facilitate this, we've developed a checklist for all investors in this process:**Figure 1** The Tech Onboarding Checklist

Organization	☐
Seasonality: tech projects should begin in slower periods.	☐
Authorities: define who is in charge of the new system.	☐
Governance: enforce rules for ingestion, changing or tagging data.	☐
People: identify skills needed and fill the gaps, as needed.	☐
Architecture & Reporting	☐
Data Maps: clearly identify all online and offline assets / data.	☐
Reporting Maps: understand what clients need from the system.	☐
Complexities: address (and govern) challenging inputs or outputs.	☐
Ingesting Data	☐
Feeds: begin the administrative process of setting up feeds.	☐
Validations: build additional time into the process for validating data.	☐
Historicals: assess past data quality and quantity needed.	☐

Education	☐
Make Time: add training to the implementation calendar for key people.	☐
Learn from Peers: complete calls with similar people at similar orgs.	☐
Be Awesome, Checklist All-Star	☐

8. Coda

It won't come as a big surprise to our readers that we believe investment technologies will transform decision-making processes for the better. And yet, for over a decade, we've seen firsthand how investors struggle with technology, despite the fact that onboarding and utilization problems are known. This ARB seeks to equip investors with a toolkit to lessen those struggles. In future ARBs, we'll keep arming investors with tools—frameworks, best practices, checklists and such—so they can better utilize technology, to transform the ways they do business and bring deeper value to their clients.

References

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Acknowledgements

The authors would like to thank the CESM team for identifying interview subjects and case studies. We'd also like to thank our reviewers, who made important contributions to the draft.

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