Ten years after: Advancements in using virtual data rooms for real estate transactions

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Abstract

Ten years after the original publication of our virtual data rooms (VDRs) in the Corporate Real Estate Journal, this paper revisits the transformative role VDRs have played in real estate transactions. Initially leveraged for their secure document exchange and real-time collaboration capabilities, VDRs have since evolved into indispensable tools for real estate due diligence, particularly in complex, high-value deals. Over the past 10 years, VDRs have adapted to meet the demands of remote work, cybersecurity threats and the growing complexity of deal documentation. This paper analyses how modern VDRs address traditional due diligence challenges — such as managing high volumes of sensitive documentation under tight deadlines — and demonstrates how modern VDRs mitigate these issues through cloud scalability, intuitive interfaces and real-time collaboration. Readers will learn how to be better prepared to select, configure and manage VDRs to support secure, efficient and trustworthy real estate transactions, with insights tailored for both buy-side and sell-side processes. This article is also included in ***The Business & Management Collection*** *which can be accessed at https://hstalks.com/business/.*

Keywords: virtual data rooms (VDRs), real estate due diligence, secure document sharing

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INTRODUCTION

Ten years ago, when Kevin Timson published an article on virtual data rooms (VDRs) in *Corporate Real Estate Journal*, the potential of VDRs in the dealmaking process became clear. As a secure online platform for storing and sharing confidential documents, they proved valuable for sell-side teams of professionals and their clients, collecting and disseminating information to buy-side teams probing these materials in real time. The promise of VDRs has been compared to driving down a long flat highway with mountains rising on the horizon from several hundred miles away. At the start of your journey, the mountains are visible yet distant, but upon your arrival, their significance and impact are even more fully appreciated.

Looking at VDRs 10 years after our initial article, all the big tools that were there back in 2015 are still here: secure exchange of documents from anywhere in the world to multiple people elsewhere in the world, full-text search capability on all documents and easy drop-and-drag uploading and indexing. Only now, with the mainstream adoption of VDRs, is it possible to more fully appreciate how these features help attorneys, advisers, accountants and other professionals move transactions to closing.

A steady stream of innovations since 2015 has dramatically improved the due diligence experience. Today, deal teams have an unparalleled ability to collaboratively review all deal components, including environmental studies, tax filings, title policies, surveys, plats, liens and leases, in a fraction of the time it took back in 2015. Most importantly, they can also do this with better safeguards for the confidentiality of the information exchanged.

For the purposes of this paper, DFIN's Venue VDR is used as a case study to illustrate the benefits of using VDRs for deal professionals working on the sale of real property, either in a stand-alone transaction or as part of the overall purchase of an entire business. With all of the features discussed later, trust is the overarching theme. Sellers have more control over the security of sensitive information they share prior to signing definitive agreements. Buyers can dive quickly and deeply into more documents, giving them greater certainty that the representations and warranties a seller provides are accurate.

THE CONTINUING CHALLENGES WITH REAL ESTATE DUE DILIGENCE

For those practitioners who have yet to be exposed to a VDR, it can be described as the online version of a room filled with documents, where interested buyers conducted due diligence before the Internet arrived. For those who are already aware of VDRs, it is important to revisit why real estate practitioners still need them now for such due diligence. In real estate, as in any industry, due diligence can make or break a deal. The most common cause of deal failure across all industries is poor diligence.[1] Unfortunately, it is no surprise when deals fail during due diligence. What is surprising, however, is when they fail because seller-provided information cannot be digested and analysed fast enough for buyers to confidently execute terms for a transaction within tight deadlines.

This challenge is due primarily to the sheer volume of information provided to and requested by buyers. Buying just one real estate parcel involves the review by attorneys of hundreds of pages from multiple documents, including preliminary title reports, American Land Title Association (ALTA) surveys, terminations of easements, lien releases, appraisals, existing title policies, service contracts, management agreements, utility bills, lease estoppels, engineering and structural reports and municipal and lien search reports. Throw in documents about the entity owning the parcel, like

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articles of incorporation, bylaws, shareholder agreements, certificates of good standing, shareholder minutes and board resolutions. Then add on document requests from the buyer's lender, the accounting firm providing a quality of earnings report and an investment banker giving a fairness opinion. Now multiply that number of pages by up to several hundred individual parcels that could be involved in the transaction. These factors combine to yield an ocean of data hundreds of thousands of pages deep. Since almost all IT networks limit file transfers via e-mail for security purposes to a small fraction of this entire set of pages, a VDR is the best, if not the only, way of easily providing due diligence information to buyers on real estate transactions.

Meanwhile, the clock is ticking to review all of these documents. Lenders and investors may be setting firm deadlines for approving a transaction. Attorneys charge by the hour. Even changes to market conditions and a seller's latest financial results open and close windows of opportunity that make a purchase attractive or not to a buyer. Under these conditions, VDRs need to work without excuse, like switching on a light to illuminate a room. Most importantly, they must seamlessly offer access no matter where a user is geographically, no matter what operating system they have or the security protocols that exist within their organisation. This access is not only to multiple parties bidding on properties. It includes scores of document owners from different departments and offices of a seller whose only role in the transaction may be to quickly upload specific documents to the VDR.

These challenges continue today, but in a different technological ecosystem. Post-COVID, more deal-team members work from home or other remote locations. Yet their demand for timely, efficient and secure document access continues. That access is provided through a chain of 'data islands', each focused on securing data in transit through a patchwork of different proprietary methods. A downloaded document travels through various secure networks, from the VDR provider's network to the recipient's employer network, then on to the recipient's internet service provider (ISP) network and finally to the local area network in the recipient's home. Such a chain constantly challenges any data room solution to maintain, let alone improve, the security, compatibility and speed at which VDRs must operate.

EVOLUTIONARY IMPROVEMENTS TO DUE DILIGENCE

So, what VDR features from 10 years ago are still benefitting the due diligence process, and how have they evolved? VDRs continue to remain essential dealmaking solutions, as evidenced by the 15 per cent annual growth that is estimated to occur for the VDR market over the next five years.[2] This growth is due to certain core functions that remain indispensable.

Security: Security is still the biggest reason why VDRs are used. Data breaches on corporate IT systems remain a problem.[3] Among competitors looking to transact with each other, the potential for misuse of sensitive corporate data is a concern. Firms purchasing real property can gain tremendous insight into a seller's success by viewing this data — eg has the seller benefitted from a tax moratorium on a large warehouse facility at an important distribution location? Has it recently refinanced the interest rate on a key mortgage? A seller's vulnerabilities can also be revealed — eg the seller's lease on its headquarters may be up for renegotiation next year or its main facility may be subject to a long-term site monitoring agreement with its municipality after a recent environmental clean-up. For sellers, giving buyers confidential information like

this is more acceptable when only certain individuals on a buy-side team can access a document, when those individuals cannot print or transfer that document and when the document is watermarked with the individual's e-mail address and a date/time stamp. These innovations, introduced many years ago, are still valuable today.

What has changed, however, is that cybersecurity threats have grown more sophisticated as security measures have improved.[4] Public exposure of sensitive information from these unauthorised leaks could lead to embarrassment, reduced standing and mistrust with the seller's customers, investors, employees or other stakeholders. The seller's legal team is obligated to protect client information. This has remained a priority even as content-sharing technology has become more commonplace and vital to deal reviews. In some US jurisdictions, attorneys must be competent[5] in using workflow technologies to protect client confidentiality. It, therefore, becomes crucial for both sellers and their attorneys to use secure, effective VDR solutions.

Various solutions have traditionally helped to clamp down on unauthorised users and cyber-attacks. This includes comprehensive audit trails, for instance, where VDRs keep detailed logs of user activity. It is far more difficult to go undetected when you leave electronic tracks. Logs provide transparency and accountability that deter potential breaches and a level of transactional detail that acts as 'fingerprints' for possible culprits.

Most VDR providers also seek certification for an industry-standard set of safeguards to provide a kind of safe harbour upon which sellers and their counsel can rely. Certification via ISO/IEC 27001:2013 compliance,[6] for example, is an important feature for VDR providers who want to limit their liability risk and demonstrate that they are taking recognised precautions to securely manage client data. The Service Organization Control 2 (SOC2) Type II audits offer another industry standard of certification. Generally, such certification requires VDR providers to have their systems regularly tested by expert third parties to verify that they are using international standards for information security and to test that the implementation of these standards is working. One such test includes 'penetration testing', where an expert will attempt to hack into a VDR provider's IT system. While these kinds of certifications existed 10 years ago, the testing, procedures, technology and methodologies have grown in scale and sophistication.

Additionally, multifactor authentication has become a standard across the IT world for reducing unauthorised access. Today, Venue requires all users to enable two-factor authentication (2FA), reinforcing account security against cyber threats. 2FA adds an extra layer of protection by requiring users to verify their identity using a second source, such as a mobile app code or biometric scan, in addition to their password. This significantly reduces the risk of unauthorised access, as passwords alone can be easily stolen, guessed or exposed through data breaches. With login hacking becoming an increasingly common threat, attackers often use phishing, credential stuffing and brute-force techniques to compromise accounts. By implementing 2FA, Venue helps safeguard sensitive information, ensuring that users' accounts remain secure even if their passwords are compromised. In an era when cyber-attacks are constantly advancing, it is important to be proactive and stay a step ahead of these threats.

Single sign-on (SSO) is another significantly improved security feature in today's VDR. This is where the VDR login is based upon a user signing into the enterprise-wide account provided by their employer. One entry is easier to guard than hundreds. SSO allows users access to multiple applications with a single set of login credentials, dramatically limiting exposure to multiple points of attack on the user's computer. Using a single set of login credentials also helps reduce the risk associated with password fatigue and the reuse of previous credentials. One of the key security benefits of SSO is its ability to streamline access management. For example, when an employee leaves an organisation, their access to all connected platforms can be revoked automatically, minimising the risk of lingering credentials being exploited. This centralised control enhances security by ensuring that only active, authorised users can access crucial systems. Additionally, SSO reduces the likelihood of phishing attacks, as users no longer need to manage multiple passwords across different applications. Venue's SSO approach provides VDR clients with the ability to quickly respond to threats by disabling access and giving them inspection features to audit login sessions.

Cloud storage: VDRs were one of the first examples of applications 'in the cloud' and continue to make improvements that take advantage of off-site storage and processing capabilities. Venue's transition to a cloud-based tool like Microsoft Azure has brought significant advantages in security, scalability and speed, giving users a more robust and reliable platform. Azure adds another layer of threat protection with real-time monitoring and compliance with global regulatory standards. Using Azure, Venue clients can seamlessly scale up increased workloads so that as customer needs grow, the resources expand without degrading performance. With its global data-centre presence, Azure's network reduces response times and latency, giving clients immediate access to crucial documents and services.

Buy-side efficiency: Now, let us consider how upgrades have made nearly all aspects of document review simpler and easier. For buyers, no matter what your competency with technology is, a poorly designed data room is a key factor in time delays with due diligence. With all the documents that get uploaded into a data room, a reviewing attorney or other adviser must quickly locate exactly what document they need, often in minutes, in order to answer client requests on a same-day timeline. To paraphrase from a famous Western, in due diligence, an intuitive interface with fast-loading document navigation and search features makes all the difference between 'the quick and the dead'. Fortunately, new tools like advanced preview features and better search functions are helping legal teams get a handle on the information. Improvements to search and navigation have occurred incrementally over the years, based upon user feedback and things as esoteric as how documents load up onto a user's screen or how file path names are determined for files in the data room. To the end user, those iterative background improvements do not matter so long as they keep happening.

A tried-and-true tool that goes back more than 10 years is the data room index. This downloadable report maps out the folders and the files in their nested format, enabling buyer teams to locate the content they need more quickly. Most VDRs also offer file preview, a useful feature for quickly viewing small images of hundreds of documents. Instead of spending extra

time opening each file, the preview saves minutes in the search for specific information. Over time, those minutes can add up to several hours, even days, saved.

Search tools have also continuously improved to streamline review. VDRs used to have limited search functions that were fine for standard text files but could not work in all formats or file types. Today, everything is searchable, even illustrations and images. Advanced VDR search tools enable users to specify searches by file type, language or date uploaded. Users can exclude terms and even include synonyms or similar words. These more sophisticated search tools can also help pinpoint detailed records on subjects like property conditions that might affect purchaser liability. For example, you can find records that might document evidence of contamination, title limitations, warranties on building construction and repair work and maintenance records.

Another time-saving feature that has evolved for buyers is their ability to create custom folders where they can organise documents in ways that make sense for them instead of relying upon a folder structure that the seller created. Users can organise files and build their own view. If a buyer is interested in a specific set of files, they can drag and drop documents into a virtual folder and group them by subject, property location or any category they choose. Pulling important files into a custom folder helps teams shorten their review time, especially when each user may only need to review selected files scattered across a data room's folder structure.

Perhaps one of the most popular new time-saving tools is hyperlinks. In today's VDRs, every file has a hyperlink. If a document refers to information in another file, there will be a link to that file. Users do not have to leave the document and hunt down the file; they can just click to open and review it.

Sell-side set-up and control: For sellers, the VDR set-up is still a crucial feature with several iterative improvements. What once took a day now takes an hour or less, including the creation and upload of documents in nested folders, the set-up and permissioning of buy-side and sell-side users and the notification to users that the data room is up and running. Sellers continue to create different views customised for each potential buyer, without revealing the identities of other bidders. If multiple properties are being offered, the seller can easily provide specific documents to specific buyers.

'Drag & Drop' tools are still used to upload documents without having to rely on e-mailing to product managers. Now, however, improvements in file compression technologies and overall network speeds have made this process much faster. These tools are also more compatible across different web browsers and operating systems. All these features are important because they do not require a document owner to have too much technical expertise in order to get the file directly into the data room.

Last, sellers still rely on several tools that give them the ability to maintain review discipline. This means that questions can be limited, review times can be set and file access privileges can expire or be terminated as needed.

Additionally, Venue now offers sellers a significantly enhanced executive-level suite of tools for comprehensive oversight and administration across all data rooms. This capability helps organisations

manage multiple transactions, projects or business units that require separate, secure workspaces. With a centralised administration panel, executives and administrators can monitor user activity, enforce security policies and maintain consistency across all data rooms. This level of visibility ensures better compliance, risk management and operational efficiency by allowing a seller's executives to quickly assess access permissions and data usage across the organisation. Additionally, having a unified management framework reduces redundancies and improves collaboration while maintaining strict security controls.

VDR LEVERAGE MAJOR TECHNOLOGICAL BREAKTHROUGHS FOR GREATER DUE DILIGENCE EFFICIENCY

Several recent technological developments have helped take due diligence to another level using VDRs. Limitations that VDRs faced just a few years ago are mostly gone, thanks to advancements in network capacity and cloud, processing power, AI and interoperability.

Artificial intelligence: It is playing a bigger role in VDR performance. Like a second set of eyes, AI is helping in areas like smart document analysis. It can identify key terms like lease expirations or environmental risks and compile them in a single folder, saving hours in the manual review process. AI can also provide valuable predictive analytics to forecast risks and outcomes. Search is enhanced with AI-powered semantic capabilities that find terms beyond keywords that have similar meanings. It is like a bigger net to catch what might have been missed. AI can also be used to automatically sort and organise documents intelligently by content. This is the sort of cognitive, clerical work that can take days by hand. Another AI advantage is automated redaction. Sensitive information, including personal information, Social Security numbers and login passwords, can all be redacted instantly.

Cloud-based processing: The abundance of bandwidth on fibre-optic networks and responsive cloud-based VDR applications has opened the way to a whole new review experience. Large file formats like 4K video are no longer a problem to view. Additionally, improved algorithms help limit errors that can occur during bulk downloads. Many of these features emerged because of the shift from internally managed data centres to third party cloud providers.

Navigation and search: Advanced queries can pull up images, illustrations, videos and other files that basic search cannot. Instead of relying on file attachments and footnotes, supporting material can have a hyperlink within the documents to help keep the review more contained and seamless.

System interoperability and integration: VDRs have evolved to the point where they now play nice with a seller's internal document tools, such as customer relationship management (CRM), electronic document repositories (both cloud-based and on-site) and project management systems. VDRs are part of a unified ecosystem where data in many different file formats can be more seamlessly exchanged, formatted and transferred between systems in real time, whether you are moving reports from rent roll data from accounting systems, high-definition drone videos from the seller's marketing department or transferring large-format drawings from a general contractor or computer-aided design (CAD) files from an architecture firm.

VDRs AT WORK TODAY

With all of these improvements, VDRs enable deeper, more comprehensive reviews and ultimately better accuracy. One example would involve the sale of a property that includes several hundred office lease interests in the sale, where the seller warrants that these leases were assignable to the buyer. A reviewer could search for specific keywords to help better locate the assignment terms of each lease. They could then tag these documents with comments using the VDR's note-taking systems. These notes are appended to the document in the VDRs index. Next, the reviewer could group the documents into a custom folder for later review. Instead of starting an e-mail thread, the reviewer can pose questions in the comments module, where the seller can provide answers within the shared document.

In most VDRs, these Q&As can be exchanged securely, and the seller or administrator gets a complete record of all questions posed and answers given. This log includes who asked the question, what document or folder it related to and when the question was asked. The comments section provides a confidential, auditable list of questions submitted by reviewers and the answers posted by the seller. These questions might even lead to further disclosures. Without interrupting the flow of the process, the seller could make additional documents available. This upload would send a notification to the buyer's team, and the review could continue.

The give and take in the comments section helps give buyers reasonable access to information. For the sellers, transcripts of the interaction can help show that all the material documents have been provided.

With real-time updates, there are now fewer chances of working with outdated documents. With all the VDR application data securely housed in the cloud, there is no sprawl, no files scattered around sitting on separate machines.

CONCLUSION

VDRs have improved in many essential ways and, most importantly, have delivered on the core principle in real estate deals: trust. With enhanced security, transparency and efficiency, VDRs have become more effective facilitators of successful corporate real estate transactions. Just look at how new search tools allow bidders to sift through documents more quickly to better validate seller representations and warranties, environmental conditions, the state of a property's title and other details influencing the property's risks and overall value. This paper, while only a snapshot of the evolution of VDRs, provides a good starting point for demonstrating how VDRs have improved over the past 10 years when commercial real properties are put up for sale. Buyers gain from the increased disclosures enabled by VDRs. Sellers can attract more bidders and extract more value from deals by using detailed property features to buttress their negotiations and increase the value they receive from property sales.

Authors' Note

The content of this paper has been prepared for informational purposes only, does not constitute legal advice and shall not be construed as an offer for representation, nor is it intended to create, nor shall the receipt of such information constitute, an attorney–client relationship.

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