



GIGAOM RESEARCH

Sector Roadmap: file sync-and-share platforms

Stowe Boyd

a social report

Sector Roadmap: file sync-and-share platforms

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TABLE OF CONTENTS

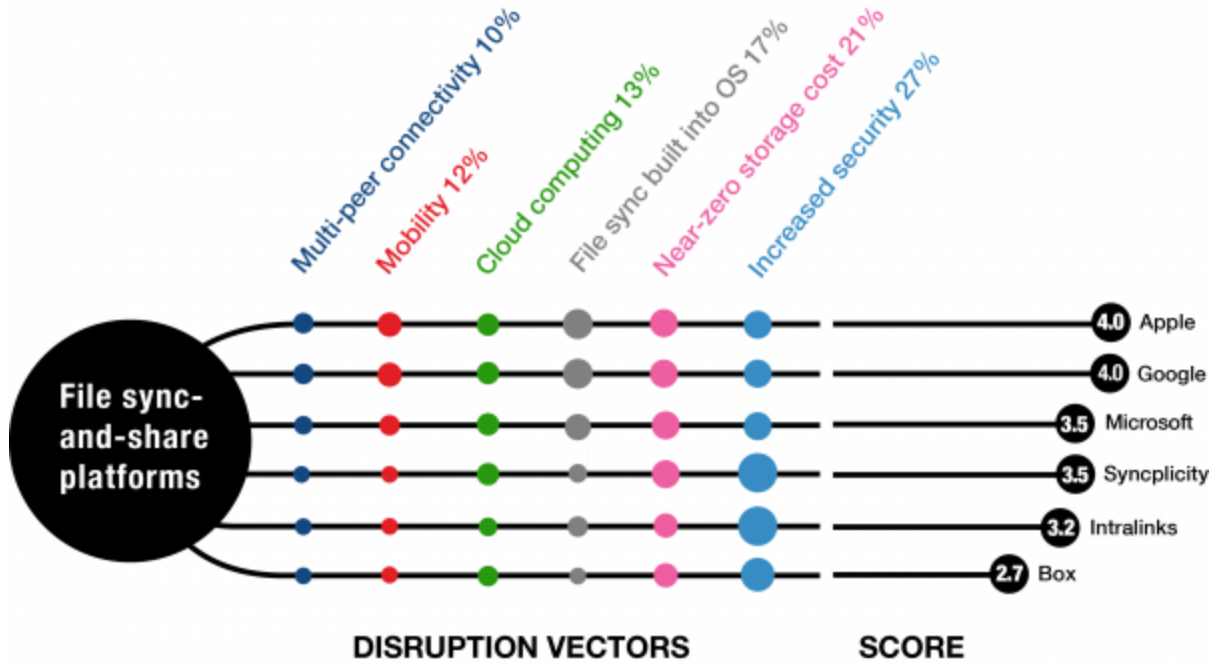
1. EXECUTIVE SUMMARY
2. INTRODUCTION
3. METHODOLOGY
4. DISRUPTION VECTORS
5. COMPANY ANALYSIS
6. OUTLOOK AND KEY TAKEAWAYS
7. ABOUT STOWE BOYD
8. ABOUT GIGAOM RESEARCH
9. COPYRIGHT

The rise of file sync-and-share applications like Dropbox, Google Drive, and Microsoft OneDrive has come at an astonishing rate, with hundreds of millions now using such tools on a daily basis. Today a wide variety of offerings supports a diverse set of users. That group of users includes individuals seeking to access their personal files across different devices, small work groups sharing folders and documents as the foundation of their work, and enormous corporate document-management solutions that serve thousands of workers involved in critical enterprise processes.

We've applied this Sector Roadmap™ analysis to the latter two use cases, based on the premise that file sync-and-share can act as the distributed core of enterprise-collaboration architecture. However, there is a complicating factor: Market consolidation is imminent, and indeed may have already begun. This ongoing consolidation operates like a meta-disruptor. As a result, we've introduced some market-specific models to help us understand sector dynamics better.

Key findings in this analysis include:

- Growing interest in security in many industries and functions is translating into an explosion of security-oriented file sync-and-share offerings, but existing enterprise software vendors such as IBM, Microsoft, and the entry of Amazon's Zocalo will destabilize the sector.
- File sync-and-share capabilities will soon be offered at the operating-system level from Apple, Google, and perhaps Microsoft. This, combined with cloud-storage pricing approaching zero, poses serious challenges for most pure-play file sync-and-share companies.
- We have identified three classes of offerings: “best-positioned” companies (which share the characteristic of scale), “niche players” (which share the attribute of being focused on a specific niche, vertical, or set of use cases), and “challenged” organizations (which are most negatively impacted by the market consolidation in the offing).
- Of the representative companies we evaluated through the lens of the Disruption Vectors driving the sector, Apple and Google have the strongest position, followed by Microsoft, Syncplicity, and Intralinks — the latter two with strong niche player potential. Box remains a solid general-purpose player, but its business model remains under pressure from several of the Disruption Vectors.



Key

- Number indicates company's relative strength across all vectors
- Size of ball indicates company's relative strength along individual vector

Source: Gigaom Research

Introduction

The file sync-and-share sector has grown from next-to-nothing to more than 1 billion users over the past 10 years. Vendors have moved into the marketplace from many directions — document management, financial and accounting software, and collaboration tools — as well as from pure-play startups.

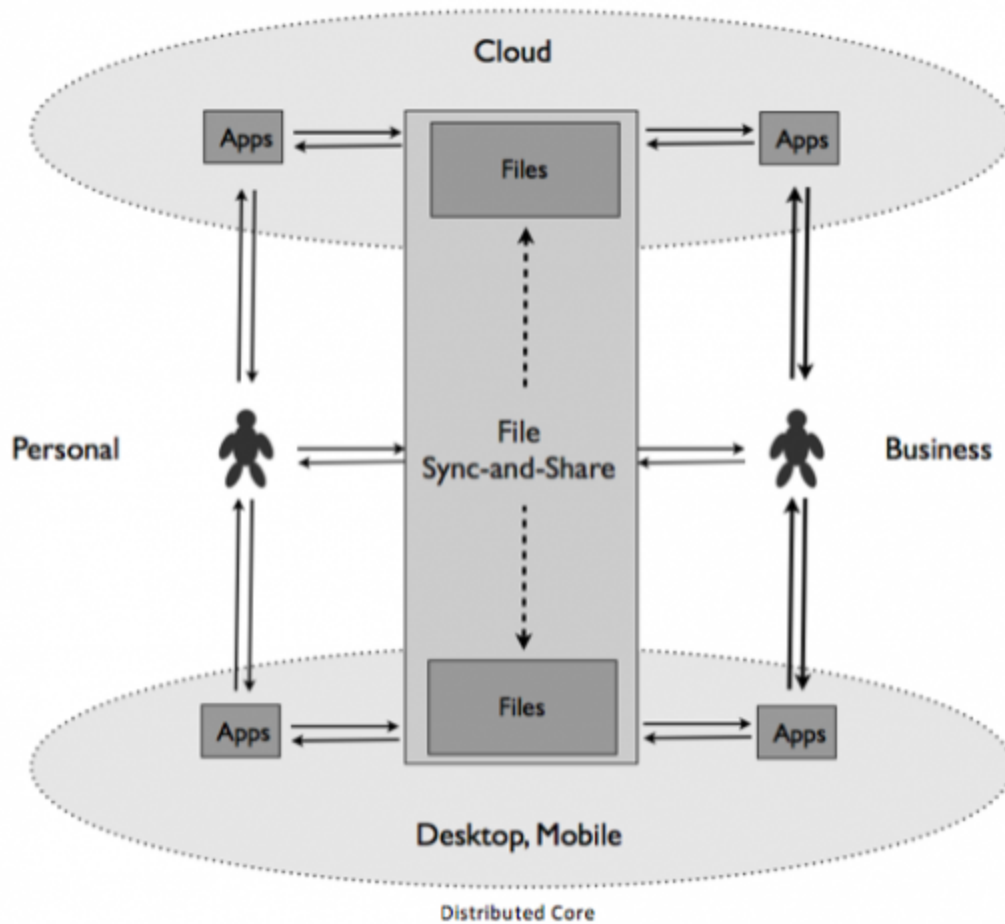
Users and their use cases are equally diverse, ranging from individual seeking to access his or her personal files across different devices to small work groups sharing folders and documents as the foundation of their work, to enormous corporate document-management solutions serving thousands of workers involved in critical enterprise processes. Our analysis will focus on the latter uses.

The central value proposition of file sync-and-share is that of a shared, distributed file system, one that is not limited to what is physically present on a single hard drive on a PC. Instead, a virtual file system is created and managed by the file sync-and-share system, and is implemented by syncing: creating or updating copies of changed files on all other devices where the virtual file is maintained, as well as maintaining a copy in the cloud (in most implementations). When these virtual copies are located on the devices of other users, or access is granted to the cloud copy, the syncing also leads to sharing.

In essence, file sync-and-share is remedying a defect in today's operating systems, which have yet to implement virtual distributed file systems. These tools fill a gap, and the size of the market (some of the largest players have hundreds of millions of users) is a testament to how critical this functionality is in a world where users have multiple devices and where sharing files has become the central aspect of a new computing paradigm.

The image below represents the implementation of this illusion of a virtual distributed file system, which can be thought of as the distributed core of the new computing model, particularly in enterprise collaboration situations:

Distributed Core Architecture



We are at an unusual moment in the sector, and the structure of this Roadmap reflects that. Generally Gigaom Research Sector Roadmaps characterize a set of critical Disruption Vectors — new technologies, buying patterns, and business models — that impinge on the vendors and buyers in the market, and analyze the vendors with regard to their products’ alignment with those forces. However, the file sync-and-share sector is on the verge of a major consolidation because of a number of factors, which are discussed at length in later sections. As a result, we’ve also characterized companies based on where they may be after this hypothetical market shift. We have grouped the vendors into three categories, and discussed the likely dynamics of those, post-consolidation.

Methodology

For the analysis in this report, we identified six Disruption Vectors. These are the key technological and market forces driving the file sync-and-share sector. In the next section we evaluate the relative importance of those vectors based on a survey of Gigaom Research analysts: Hadyn Shaughnessy, Larry Hawes, Thomas Vander Wal, Mike Dover, Cormac Foster, David Card, and Stowe Boyd. Based on company interviews and analyst panel feedback, we have rated six representative file sync-and-share suppliers for their alignment with the vectors.

Based on the thesis that the marketplace for file sync-and-share is ripe for consolidation, we have developed a model to segregate companies into three groups after a consolidation, with each company assigned as “best-positioned,” “niche player,” or “challenged” by the analyst panel.

Disruption vectors

In Gigaom Research Sector Roadmap reports we use Disruption Vectors as a way to characterize the trends, technologies, or patterns of use that have the greatest impact in the industry or market sector.

The central thesis posed to the analyst panel involved in the creation of this report was “File sync-and-share has rapidly moved from a consumer convenience to the central element of a distributed computing architecture for the enterprise.”

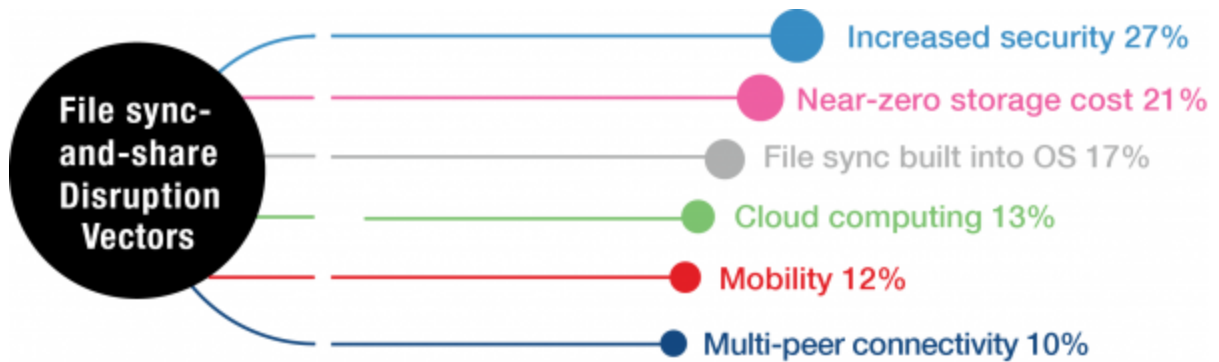
The panel votes ranged from 5 for “I strongly agree” to 1 for “I strongly disagree” and though the average rating was 3.6 there was little consensus. There was a bimodal split in the group, with two voting 5 and one 4 on the pro side, and three voting 2 on the con side. This shows a deep split in the group. The con side disagrees with the distributed core becoming the central element of new computing architecture.

Much of the case in favor is based on the notion that file sync-and-share is actually a remedy for a flaw in mainstream operating systems, which do not presently treat file syncing and sharing as core functionality. Applications like Dropbox, Apple iCloud, Google Drive, and Hightail (see disclosure), to name a few, counter the error at the operating system level. And if and when file sync-and-share is implemented at the operating system level a great shake-out will follow.

There are great examples of this from the recent past. In the early 90s, NetManage, Hummingbird Communications, and Frontier Technologies were making a considerable amount of money selling TCP/IP networking stacks that worked with the Microsoft Windows Sockets standard. What happened? Microsoft embedded its own TCP/IP stack into Windows 95 and Windows NT, and by 1999 89 percent of desktop computers were shipped with TCP/IP already on board. It quickly became the standard on Mac OS and Linux, too. And the highflying companies that were growing so fast in the early 90s collapsed or moved on to sell other products.

This is one of the most likely causes of a market consolidation, and it will favor companies building the operating systems at the expense of the rest. Other precipitating events could also fuel consolidation. For example, the entry of Amazon into the enterprise file sync-and-share market in July could be extremely destabilizing for pure-play enterprise file sync-and-share vendors.

The six vectors identified for the file sync-and-share sector and their weightings are as follows:



Key: vector weighting sums to 100%

Source: Gigaom Research

Increased security

As companies consider or implement comprehensive file sync-and-share platforms, many security issues arise. Some are first-order and obvious issues like the encryption of content from device to store to device, and controls to manage who has access to what. But increasingly there are secondary considerations, such as governmental regulations. As one example, Germany requires that certain data, such as employee information, must be stored on servers within Germany. Some companies believe that certain pieces of information are so confidential that native apps that allow users to access that information have to be locked down to the point that files cannot be duplicated or moved out of secure folders. As a result, there is a great deal of fine-grained requirements in certain industries or functional areas of businesses.

Near-zero storage cost

Here are a few recent events showing falling storage prices and the new normal of unlimited storage with business or enterprise offerings:

- On 16 July 2014, Box announced that the “business” tier of its for-fee offering now has unlimited storage for \$15/user/month, just [as the “enterprise” tier had already done](#).
- Google Drive and Microsoft OneDrive now start with [15 GB for free users](#), and Google for Work starts at unlimited storage for \$10/user/month.
- Apple iCloud Drive — coming this fall — [will offer 200 GB for \\$3.99/month](#). We’ll see if the company revises that number down it gets closer to release.

- Dropbox for Business has always been unlimited, although the company start users with a smaller amount. We'll see how it responds to the downward price pressures on the per user/per month side of the equation.
- [Amazon has entered the market with Zocalo](#). Its starting point is \$5/user/month, including 200 GB of storage. We'll see if the company shifts its plan to unlimited storage by the time the product is fully launched.

File sync built into OS

There are only a few important operating systems that typical end users come in contact with these days: iOS, Mac OS X, Android, and Windows. At the present time none of these has file sync-and-share built into the operating system. The offerings of the various vendors run as a combination of native apps on the devices and cloud-based services for syncing and storing files. In general these do not come preinstalled, so users wishing to use Huddle, Box, Intralinks, or other products have to install the native apps or have their devices provisioned by IT staff.

However, Apple, Google, and Microsoft are the source of these operating systems, and they seem to be heading toward a future in which file sync-and-share is built into the OS. What we have seen coming from Apple and Google, in particular, suggests that this fall services baked into the OS will provide file sync-and-share: for Apple, iCloud Drive on iOS 8 and OS X Yosemite, and Google's Android for Work will be supported natively by the upcoming Android L release, along with a large list of other enterprise-friendly capabilities. It's unclear what Microsoft's trajectory is, but the company seems to be somewhat behind in this push.

Cloud computing

We asked the panel of analysts "Will moving enterprise apps to the cloud matter?" The result was a fairly unequivocal No, and we ended up with a 13 percent weighting. The consensus is that existing enterprise apps are unlikely to have functionality that lines up with file sync-and-share, and therefore won't disrupt this sector nearly as much as the other vectors.

Mobility

Personal and enterprise mobility is a given in file sync-and-share and therefore even increasingly large numbers of mobile devices and users won't act as a disruption for the sector

Multi-peer connectivity

Multi-peer connectivity consists of ad hoc networks created by apps that are not based on internet connectivity but instead on various approaches to near-field or bluetooth connectivity. The technology is not in general use as yet. For that and other reasons we don't think this is much of a disruptor at the present time.

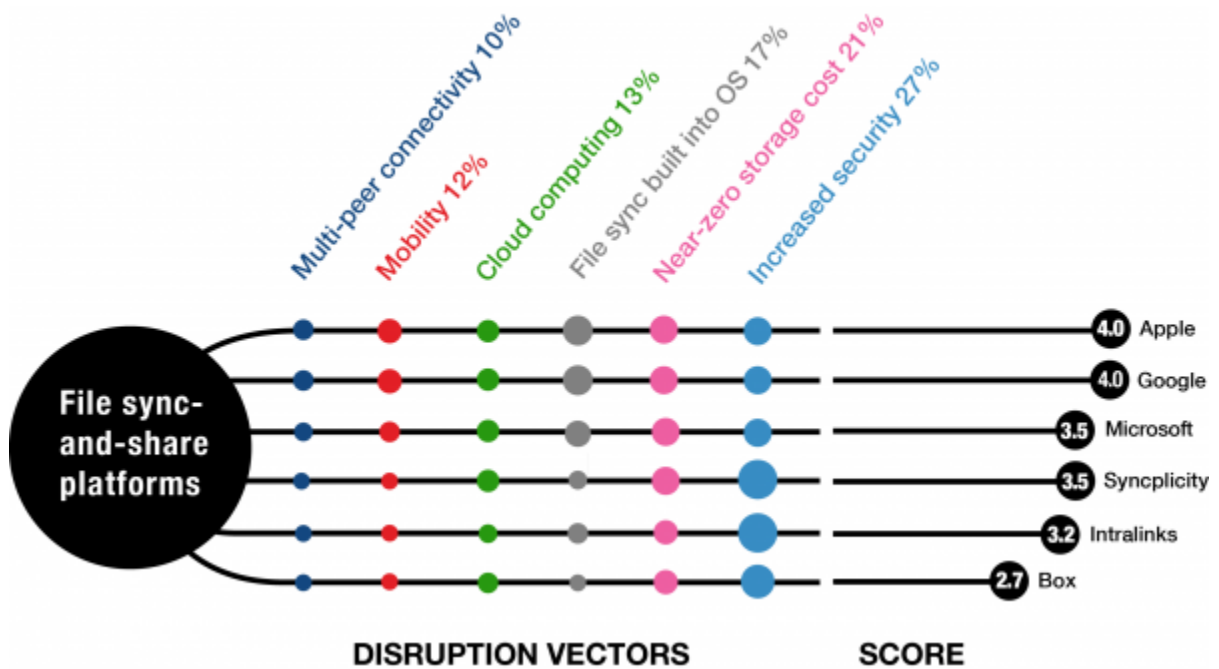
Other drivers?

We asked the panel if other possible drivers mattered in the file sync-and-share sector. These included ease-of-use, coediting documents, user experience, and others. We summarize here because across the board we had good consensus that these factors aren't disruptive. This doesn't mean they aren't relevant to users and buyers but that companies have already factored them into their strategy. Vendors are focused very strongly on user experience and ease-of-use, and small enhancements are unlikely to play a major role in upsetting the file sync-and-share appcart.

***Disclosure:** Hightail is backed by Alloy Ventures, a venture capital firm that is an investor in the parent company of Gigaom.*

Company analysis

The companies examined for this report represent a mix of operating-system players and applications companies, both general-purpose and niche-market focused. It is not an exhaustive list but one that allows us to explore disruption and vendor responses. In a sector that is highly fragmented these companies also represent the response to different disruption vectors.



Key

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Source: Gigaom Research

Apple. Apple is one of the best-positioned companies in the sector for the future, although its current file sync-and-share offering, iCloud, has not broken out. However, the company's mobile strategy has made it the leading choice in the business-mobility market, culminating in a recent partnership with IBM. The future direction of iOS 8, and especially iCloud Drive, means that Apple is likely to be one of the dominant vendors following any market consolidation.

Google. A giant company with huge resources and lines of business that impinge on the file sync-and-share market, Google is also one of the best-positioned companies in the sector. It has a deep foothold with Google Drive and Google Apps for Business, and its control of the future direction of Android (as indicated by Android L) and its capacity to scale in the cloud means that Google is likely to be one of the dominant vendors following any market consolidation.

Microsoft. Microsoft is a major enterprise software vendor, with a large market share for Office, Office 365, Sharepoint, Analytics, Yammer, and other products. It is a rapidly growing cloud company, driven mainly by Azure. Microsoft OneDrive has had a slow start compared to companies like Dropbox, Box, and Google, and its mobility side has been hampered by the low adoption of Windows phones and tablets. And it is still well-positioned for file sync-and-share for clients with large Microsoft investments in Office and Windows.

Syncplicity. A former startup acquired by storage and document management company EMC, Syncplicity will likely survive market consolidation as a strong niche player based on its well-designed security implementation, administrative controls, and integration with other enterprise infrastructure, and EMC storage solutions.

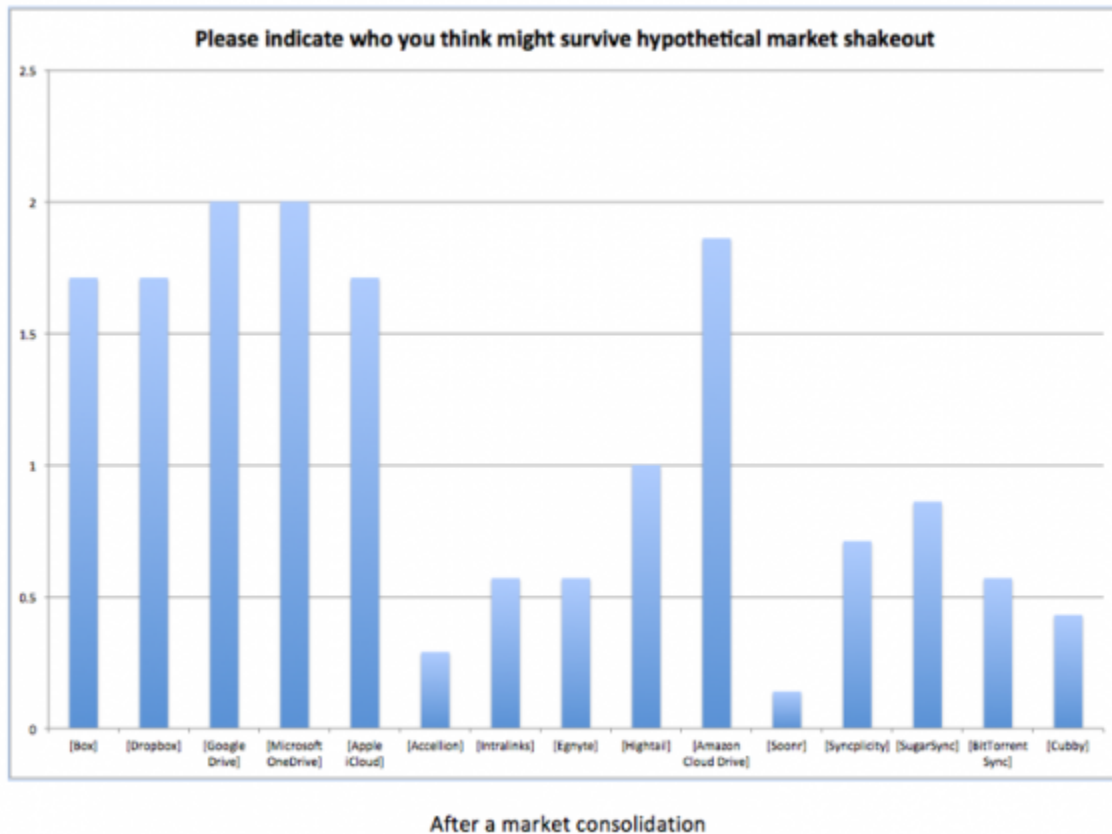
Intralinks. A company with a long history in highly secure file management solutions, Intralinks is involved in a multiyear development initiative to build on its deep presence in regulated and highly confidential functions with a new updated user experience. We believe the company will continue as a successful niche player even after a market consolidation.

Box. Box has a stronger security orientation than the others, at this time, at least until Amazon's Zocalo reaches the market. We believe being a pure-play file sync-and-share company may be as much a liability as a benefit, since we predict baseline file sync-and-share capabilities will soon be provided by the next versions of iOS, Mac OS X, Android, and perhaps Windows. Below, in the category-specific analysis, you'll see that the analyst panel rated Box among the best-positioned companies. Box has made big inroads into enterprise customers based on its efforts to fit into organizational models of use, deployment, and security, as well as its consumer product. In the context of the consolidation of the market some of its headway will be checked as the larger vendors, like Amazon, roll out solutions that counter that early enterprise advantage, and Apple, Google, and Microsoft steal the consumers back.

Category-specific company analysis

One thesis that underlies this report is that the file sync-and-share market is about to consolidate. So we surveyed the panel based on that, and their response averaged 4.29 out

of 5, with 5 being “I strongly agree” and 1 being “I strongly disagree.” And, as mentioned earlier in this report, we asked the panel to assess each company relative to what their situation might be after a market consolidation, assigning each to one of three groups: “best-positioned,” “niche player,” or “challenged.” The company analysis section is organized around those three groups, with discussion of the players in each.



The panel rated the companies in the chart above at best-positioned, niche player, or challenged, with the respective value of 2, 1, or 0. When averaged we got the above results.

It’s worth noting that the drivers and effects of a market consolidation may also make integrated file sync-and-share produce less attractive, So work-management tool companies like Huddle, IBM Connections, and dozens of others may opt to integrate with market leading solutions rather than offer their own. As a part of that trend, [Salesforce dropped its in-house offering](#), Chatterbox, earlier this year in favor of integration with Box and others.

Best-positioned

Those above scoring 1.5 and above are the best-positioned in a hypothetical market shakeout: Box, Dropbox, Google Drive, Microsoft OneDrive, Apple iCloud Drive, and Amazon Drive. (Presumably, now that Amazon has announced Zocalo, the company might rate even higher.)

Characteristics of scale. These players have millions of customers using their products at a minimum, and they all have a consumer product, even when they also have an organizational variant as well.

Increased Security. None of the likely best-positioned vendors have fielded a solution that could be considered a fully realized organization-focused “impermeable” form of enterprise security. The people that gravitate towards a solution like Dropbox or Google Drive aren’t selecting it because it’s insecure but because it is simple to move files and to easily share files with others.

Dropbox for Business is not impermeable. While the product supports enterprise-style administration — single-account management, remote wipe, audit trails, AES-256 encryption, and so on — there are no means to lock down the synced folders so that, for example, documents can’t be moved or copied from the managed folders. Recent discussions with representatives of the firm indicated that Dropbox doesn’t intend to offer an impermeable solution in the foreseeable future.

Box comes closest to an “impermeable” offering, with Amazon and Google headed that way. Amazon Zocalo is still not in general deployment, and we predict that this will come the closest in the next few years to what enterprise IT would consider a full-up enterprise solution.

Amazon and Box have to be considered the strongest in trending with this vector. Dropbox gets a nod for its two-headed client: different tabs for personal and business accounts.

Near-zero storage cost. The majors in this group — Apple, Microsoft, Amazon, and Google — have been pushing toward the free-and-infinite end of the spectrum for business users, and extremely low cost for individuals. Since these companies want to pull others into their ecosystems they are making file storage, sync, and sharing tables stakes, and not a huge revenue source.

Dropbox and Box are going to have an increasingly hard time as the downward pressure on the basic value proposition continues. So it looks like the giants come out ahead in this vector, and Box and Dropbox are going to be pinched.

File sync built into OS. Clearly, Apple and Google are those going farthest to responding to this disruption, or causing it.

Apple's iOS 8 and Mac OS X Yosemite, scheduled for general release in the fall, are pulling iCloud Drive capabilities into the foundation of the OS. Note that the building blocks for the capabilities allow others to do so, too, so Dropbox (for example) could build a new version for this generation of OS relying on Apple's capabilities instead of building them into its own app. This may invite an explosion of new competitors, and some of the niche players may find it easier to create rich apps that run on Apple devices. However, it may prove to difficult to compete with Apple on its own devices on the personal/porous dimension. Apple has have already announced an iCloud Drive app for Windows, but strangely nothing for Android.

Google's Android L release seems to be following the same trajectory as Apple, so that Google Drive — or at least the bottom half of it — will be more obviously part of the OS and less like an app. The arguments made for Apple hold here on Android, as well.

Microsoft is somewhat behind Apple and Google, and it does not seem that the company is moving as aggressively in this disruptive area as the other two. It has seen a great deal of turmoil in recent years, and that seems likely to continue. It's likely the company will miss the first year or two of the revolution that is going to be engendered by this disruption, or perhaps better said, Microsoft stands to be on the receiving end of the disruption that Google and Apple are going to cause.

Obviously, Dropbox and Box don't play here, at present, because they aren't full-stack players because they lack an operating system. All they can do is fill the gaps. For example, they can offer cross-OS interoperability that some or all of the giants might not.

Niche players

Those scoring between 1.5 and 0.5 are what we deem to be niche players — that is, they are carving out a particular industry, vertical, or limited set of use cases that would differentiate them in this new order: Intralinks, Egnyte, Hightail, Syncplicity, SugarSync, and BitTorrent Sync. These companies will need to push further into support for specific use cases. Many have done so already, like Intralinks' support for deal making and boards of directors, or Syncplicity's and Hightail's support for geographic controls, such as the German regulations mentioned earlier.

Syncplicity also has a compelling vision for contextually sensitive file access, one that could differentiate it in a user experience fashion. However, that vision has not been realized yet, although those tracking the industry should pay attention to what emerges.

Others illustrate the use case and vertical orientation in this sub-sector. Egnyte, for example, has a large number of clients in engineering and architecture because of the product's support for a hybrid architecture, where some files, usually large graphic files, are located on a server on premise — at a work site or in the office — while other files are managed in the Egnyte cloud. This avoids the time to access the very large files through the web but otherwise provides anyplace access to smaller files on devices. This sort of use case is highly defensible, even in a sector dominated by giants.

Increased Security. The niche companies share the characteristic of being strongly oriented toward the organizational end of a personal/organizational dimension. And some of the players — like Intralinks, Hightail, and Syncplicity — move very far toward the impermeable ideal. However, the snare for them is that actions by Amazon (and soon, by other majors like Microsoft and Google) may commoditize even the highest levels of impermeable security.

BitTorrent Sync is in another special niche. The product relies on the BitTorrent protocol — an encrypted peer-to-peer service where, after authentication, files are synced and shared directly from one device to another — without passing through the BitTorrent server. This makes transfer of large files much faster, and since no copies are made on a cloud server the possibility of those documents being subject to a government inquiry or some other sort of disclosure is low, or even zero.

Near-zero storage cost. As file storage is commoditized, these vendors will have to increasingly deliver value based on their sophisticated capabilities, and in fact, that's the reality in this sub-sector already. However, to the extent that a company continues to support or pursue more personal use cases — like Hightail's positioning around sharing large files — will be increasingly ineffective.

File sync built into OS. Some of these companies might find an edge by redesigning their offerings to better integrate with new capabilities of iOS, OS X, Android, and Windows. For example, Syncplicity's vision for contextual file access could be realized in part by taking advantage of new functionality on iOS 8 and Android L and exploiting notifications while at the same time continuing to rely on parent company EMC's cloud computing capabilities for file storage.

Companies with the most prior experience adapting to well-defined niches and verticals, like Intralinks and Egnyte, and those who are pursuing the changing expectations of users because of new sorts of user experience emerging, like Syncplicity, will be more likely to thrive in a consolidated market.

Challenged

The analyst panel rated companies below 0.5 as most at risk in a world with the various disruptions envisioned and the likelihood of a market consolidation. And neither are they seen as being able to carve out a defensible niche. These include Accellion, Soonr, and Cubby.

Some of the players in this group are solutions that are positioned around enterprise-grade security, but even that could become a commodity once giants like Microsoft and Amazon get into that business. Accellion could evolve into niche status with its organizational/impermeable technology and its successful installed base of customers. We believe that the company's transition out of old-time secure large-file transfer has made its marketing very tightly focused in the enterprise space.

Outlook and key takeaways

Our research suggests the market for file sync-and-share is going through a major consolidation, and the result will be that the major players in computing — Apple, Google, Amazon, and Microsoft — will come to dominate the market. Their offerings will be overlapping in functionality in part, but will be quite different in what they emphasize and omit.

Much of the nature of these products is unclear, since the technologies involved — Amazon Zocalo, Android L, iOS 8, Mac OS X Yosemite, and others — have not been released to the general public. However, these will all be released in 2014, and those technologies will shape the marketplace for file sync-and-share — and the greater marketplace for work technologies — for the next decade.

The other vendors that have large customer bases — like Box and Dropbox — will be put into a difficult position, since the majors are treating file sync-and-share as one element of larger strategies. The majors can afford to treat file sync-and-share as a loss leader, and make their money from other parts of their stack.

Despite their huge funding history — which is a proxy for the impact of file sync-and-share on computing, not necessarily a proof of future profits — Dropbox and Box remain best-positioned after consolidation, but in the long may become niche players, or attractive acquisition targets.

Those players that are strongly committed toward solving the secure document storage and sharing headaches of large or regulated industries can be successful. But secure file sync-and-share will be largely commoditized, leaving some complex niches available.

The fluid nature of file sync-and-share means that customers can transition from one vendor to another by copying the existing folder/file hierarchy and moving the files. However, collaboration and other applications built on file sync-and-share involve complex access settings and layers of metadata, though nothing as complex as transition from one ERP solution to another. So we expect to see a lot of customer transition as the market consolidation progresses, in 2014 and beyond.

And for the long tail of startups and hangers-on that are struggling to grow and build traction in today's market, the market post-consolidation looks extremely inhospitable, a sector with low or zero margins and strong multi-billion dollar competitors. There is room for innovation in even the most mature markets: consider Tesla. But new entrants

will have to be leveraging something really new, like Tesla did with electric cars, to get even a toehold.

About Stowe Boyd

Stowe Boyd describes himself as a web anthropologist, futurist, and analyst. His focus is the future of work and the tectonic forces pushing business into an unclear and accelerating future. Boyd has worked as an analyst for Gigaom Research for several years and as the curator in the social and future of work area since fall 2012. Boyd has been tracking the social revolution online since 1999, when he coined the term “social tools” and starting blogging. He was president of Corante, a blogging pioneer, in the mid-2000s and has been widely recognized as a theorist and influencer in the social web. He coined the term “hashtag” in '07 during an online conversation with Chris Messina, the originator of the convention.

He is at work on a book, *Fast-and-Loose: The New Form Factor For Work*. Boyd has participated in numerous conferences and events worldwide, including Web 2.0, Enterprise 2.0, Gigaom Net:Work, Reboot, Next, Mesh, Shift, Lift, SIBOS, Defrag, SXSW, and several TEDx events.

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