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Strategic Audit of Microsoft Office

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MICROSOFT OFFICE:
A STRATEGIC AUDIT

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Abstract

Microsoft Office is some of the most iconic software ever made. It empowers people and organizations across the planet to achieve more.

The scope of this audit is limited to Office for business. The consumer market, which is less profitable and dominated by free products, is not considered.

This audit attempts to explain the strategies currently being pursued by the Office leadership team, and the relation of these strategies to the broader industry. Ultimately, this paper attempts to identify threats to Office and offer suggestions on how best to mitigate those threats.

Key Words: Microsoft, Office, productivity software, strategic audit

Note on Sources

A significant portion of this paper is based on my experience as a Microsoft intern. This includes access to the internal employee database and conversations with Microsoft employees from across the Office division. In particular, a lot of the foundational ideas in this paper come from an afternoon Q&A session with Rajesh Jha and the rest of the Office exec team.

Many of my assumptions and estimates are extrapolated from conversation and observation. In some cases, I've omitted details in an effort to avoid exposing potentially sensitive information and respect my non-disclosure agreement.

Details on Microsoft and Google acquisitions come from their respective lists of acquisitions on Wikipedia.
https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Microsoft
https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet

OUTLINE

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Background – What is Office?

"Microsoft Corp dominates the $15-billion market for business productivity tools for a reason: Its longstanding product is reliable and IT managers have little incentive to gamble on something new." – Reuter's Dave Paresh

Microsoft Office is a bundle of productivity applications, primarily targeted at business customers. The three core (and oldest) applications are Word, PowerPoint, and Excel.

Microsoft Word is a general purpose text editor, useful for writing reports such as this one. PowerPoint is software for making presentations, and such is the pervasiveness of Office that all presentations are referred to as "PowerPoints" regardless of the software behind them. Excel is a spreadsheet and makes programming and automation accessible for many accountants and business people worldwide.

The fourth core app is Microsoft Outlook, a company-wide communication system, letting employees email each other, look at each other's calendars, and schedule meetings. In some ways, Outlook is the keystone that ties the suite together. There are other decent offers for text editors and presentation software out there, but configuring and maintaining an email server (especially with the legal requirements around transaction records) quickly becomes a pain. The internal communication offering (and the hosting that Microsoft provides) is an essential part of Office.

Office also includes a number of smaller services:
- OneDrive, a file storage and syncing system
- OneNote, a hybrid text editor for quickly organizing ideas
- SharePoint, a platform that enables collaborative document editing
- Publisher, a layout and design software (comparable to Adobe InDesign)
- Access, a beefed-up version of Excel for creating and maintaining databases
- Yammer and Skype for Business, both alternate communication platforms

Surprisingly to some people, all Office applications (except Access and Publisher) also come with mobile apps and web versions that support interactive editing.

The newest member of the Office Suite is Microsoft Teams, a Slack competitor intended to be Microsoft's flagship communication platform, replacing all of Outlook, Yammer, and Skype for Business.

Background – Office 365 & Subscription Models

From 1990 until 2011, Office was available only under a license model. A customer would pay a flat fee, and then have permanent ownership of a specific version.

Starting in 2011, Microsoft has been pushing for Office as a subscription service, under the banner of "Office 365". There are several benefits to software as a service:

- New features become available as they're developed. There's less pressure to "meet the release deadline", and less shuffling to spread features out between releases in order to drive sales. Better incentives lead to better software.

- Predictable monthly cash flow, no need to deal with cyclical sales or an underperforming version that customers can skip.

- Easier Maintenance. When most users are on the most recent version, developers only need to support a single version (rather than 4-5 licensed versions). This makes security patches and bugfixes easier to implement.

- Better customer perception. If people are working every day with an outdated version of your software, they will perceive your software as old and clunky and will be more likely to consider switching to a competitor.

Because of these reasons, and the closer economic alignment between a subscription model and costs of maintaining and improving software over time, Office 365 offers better value to both Microsoft and to its customers.

Microsoft has heavily pushed Office 365 as an improvement over traditional Office licenses. They issued a 10% price-hike on permanent licenses for Office 2019 specifically to encourage customers to switch to a subscription model (Tung 2018). They even issued an ad campaign marketing Office 2019 as being worse than Office 365 (.

Background – Pricing & Competitive Comparison

Office is broken into two primary categories. The tools for doing work (Word, PowerPoint, Excel, etc.), and the communication platforms needed for running a business. Microsoft offers several combinations of these products:

Essentials Tier – $5 per user per month – just the communication platforms

Basic Tier – $8.25 per user per month – all the tools for doing work (Word, etc.)

Premium Tier – $12.50 per user per month – everything from both categories

Enterprise Tier – $20 to $35 per user per month – includes all the above plus search and legal compliance tools

Office's only direct competition comes from G Suite, which is a subscription-based productivity suite based on Google Drive. The two services have similar economics:

Basic Tier – $6 per user per month – all applications and business email

Business Tier – $12 per user per month – upgrades to unlimited Drive storage.

Enterprise Tier – $25 per user per month – includes all the above plus search and legal compliance tools for emails

I had trouble comparing the market share of Office vs G Suite. Both categories are obfuscated within their parents' financial reports, and different articles and measurements return wildly different numbers. However, the consensus seems to be about 85% Microsoft and 15% G Suite by revenue. LibreOffice and OpenOffice both have users, but no revenue since they are free products.

Office's primary advantage over G Suite is timing. Office came first and became established, and it's hard to compete with the incumbent. The primary complaint about Google's software is that "It's good until you need to talk to a human". While G Suite has a smoother user experience, Microsoft's reliability and customer service give it an edge in corporate sales.

Current Strategy – Is Office "Too Big to Fail"?

With a dominant market position and only a single competitor that's struggling to play catch-up, Office seems invincible. Because of its immense inertia, even without major updates, Office would likely retain its market share for at least a decade.

One potential strategy would be shifting most of the developers currently on Office to other projects with higher growth potential (Azure ML, Azure IoT, Hololens, PowerBI, etc.) leaving behind just a skeleton crew. This strategy, if pursued, would be a horrible mistake; one Microsoft has made before and knows better than to make again.

(Story Time ~ the death of Windows)

For most of the company's history, Windows was the beating heart of Microsoft. Everything the company did revolved around Windows in some way, and Windows was the weapon they used to beat competitors into submission.

Starting in the earlier 2000s, after killing Netscape and winning their antitrust case, Microsoft cut off internal resources from Internet Explorer. The browser had done its job; it had defended the sanctity of the OS. Through the subsequent years, consumers kept on using Internet Explorer. The browser was good enough, no need to update it, right? Then 2008 comes, and Google drops Chrome, with 8 full years of technical improvement over IE. The market switches from Windows to Chrome as the default digital platform and Windows (while still popular and profitable) loses most of its business leverage and market differentiation.

This huge shift wasn't fully understood in Microsoft at the time, and leadership continued using their old Windows-focused playbook. The assumption was that because everyone used Windows, everyone *loved* Windows. The truth was that people used Windows because it was good enough, but the brand loyalty that had previously existed had evaporated. Microsoft launched Windows Phone and Windows 8, assuming that their loyal fans would flock to the new mobile Windows just because it was Windows. They were mistaken. Ballmer got fired, Satya got hired, and Microsoft got rebranded from an "OS company" to a "cloud and productivity company".

Moral of the story – If you have market leadership, you still have to invest in maintaining control. And re-capturing a market is much more expensive than any maintenance costs.

Strategy Measurement Criteria

Having established that Microsoft should continue investing in Office, what metrics should they try and optimize for?

Because Office is so strong, rather than looking at new opportunities or room for growth, it makes more sense to take a defensive outlook. We'll identify potential existential threats, and offer mitigation strategies.

Questions to consider:

> *Can Office remain relevant and profitable in the long term?*

> *Within the next two decades, will some event, competing product, or technological transition cause Office to lose its business leverage?*

Current Strategy – Acquisitions

One way for incumbents to retain market position is through an aggressive acquisition strategy, by purchasing any new companies that threaten to encroach on their business.

Microsoft largely sees its core Office business as unassailable and thus doesn't spend on acquisitions for direct threats against Word, PowerPoint, and Excel.

Where Microsoft does spend heavily is on the areas where their business is weakest. The Yammer acquisition for $1.2 billion in 2012 was intended to fill the business need that Slack ended up growing to fill. Microsoft purchased Acompli in 2014 and successfully rebranded it into Outlook Mobile. The GitHub acquisition fills dual roles as a feeder for Azure, and as an essential office communication platform for programming teams.

(Story Time ~ the Upstartle acquisition)

This takes place back in 2006, before Chrome and before the iPhone.

Google Docs, which has grown into Office's biggest competitor, originated at a startup named "Upstartle". The startup intended their product to be an online version of Office, and from the beginning intended to be purchased by Microsoft. The entire product was built with Microsoft website technologies: the language, web framework, and database were all Microsoft products.

Microsoft Acquisitions gets phone calls saying "this startup will be the Office killer" about 3-4 times per week, and basically just ignore the calls. They refused to purchase Upstartle because of their policy against acquiring direct threats to core Office products, and to avoid giving the browser more power over the OS since Windows was still king.

In March of 2006, Google purchased Upstartle. In a project that's now programmer legend, a team of four developers refactored the entire project from Microsoft's stack into Google's technologies, and Google was able to launch Google Docs publically in February 2007. Soon after, Google acquired web-based presentation and spreadsheet startups (Tonic Systems and 2Web Technologies respectively) and integrated them onto their platform, forming Google Slides and Sheets.

Microsoft does not regret letting Google purchase these startups. They figure that once Google had committed to creating on Office competitor, the end result of G Suite was inevitable. These startups were simply good starting points, and the immense amount of resources that Google has since poured into the projects made them truly successful.

Current Strategy – The Slack Problem

As of two years ago, Slack was the biggest immediate threat facing Office. Slack was a better platform for office communication and community building than anything Microsoft had to offer.

When Slack becomes established at a company, as the primary everyday communication tool, it gives power to Slack the company. They can bundle with (or offer integrations for) other productivity software, giving them leverage over Microsoft. Slack could extort payments in order to preference Office apps, force a costly buyout, or push competing software. If Slack had been publically traded two years ago, I think Google should have acquired them. The G Suite, backed by Slack as a communication platform (and bundled at an attractive price) would have been a deadly competitor to Office.

To counter the threat of Slack, Microsoft was forced to extreme lengths. They developed an in house alternative (Microsoft Teams) and then bundled it with their existing offering, abusing their monopoly to crush the upstart threat to their established platform. This was an ugly play, but an effective one.

Teams is pushed as the successor to Microsoft Outlook. Teams is effectively free to all companies that are already paying for Outlook. Additionally, if a message goes unread for five minutes on Teams, a notification is automatically sent to your Outlook account reminding you to log in to Teams and read your messages there. The goal is to transition current Outlook users onto Teams as their primary communication driver.

The marketing has paid off, as of late 2018, less than two years after release, Microsoft Teams overtook Slack in total business adoption (Spiceworks 2018). Presently, over 500 thousand organizations use Microsoft Teams (Spadafora 2019).

Through personal experience, Slack is an overall better platform than Teams. Slack has better user experience, more robust features, and better customization options leading to a greater sense of community. Teams has some of its own advantages though: better support for shift scheduling through Teams Verticals and better integrations with the rest of Office 365 notably OneDrive.

In April 2019, Slack released their own custom integrations with both Office 365 and G Suite (Warren 2019). Slack's decision to develop these integrations was largely seen as a response to the success of Teams.

Future Strategy – Pushing People onto Azure

Overview and Reasoning:

Office is good marketing for Microsoft and can benefit their other business divisions.

Since Office 365 already stores confidential communications in Azure, any company with an Office 365 subscription already has Microsoft established as a trusted vendor and has already completed the required security and compliance paperwork. This reduces the organizational friction of switching to Azure and is something that Azure sales representatives say legitimately helps win customers.

The effect is limited when company leadership makes high-level decisions about which cloud provider to migrate to because then the conversation primarily focuses on the merits of each cloud platform. However, for a single rogue developer or team of developers trying to get something into production, this lack of friction can be a deciding factor in Microsoft's favor.

The financial world still relies on Excel for critical workflows, even when Excel isn't the best tool for the job. A large part of Excel's popularity is because it's the only technical tool a lot of employees have access to at work, and so it's what they learn to use. By providing more tools to Office subscribers, Microsoft can further enable its customers while expanding its own developer infrastructure.

Implementation:

Microsoft should make Azure more visible and available within Microsoft Office.

The ideal candidate is Microsoft PowerApps, software which focuses on enabling non-technical users to develop useful business software, and that also comes with strong Azure integration. PowerApps is currently liscened as part of Microsoft's Dynamics 365 offering, which aims to compete with Salesforce.

My suggestion is for Microsoft to include PowerApps with the Enterprise edition of Office 365. Putting this tool in front of a massive audience would be an excellent way to guide customers towards Microsoft's more sophisticated products. Sales of Dynamics would slow without the extra features, but the increased engagement with Microsoft's ecosystem would hopefully outweigh the loses.

Future Strategy – Education & Gen Z

Overview:

Office has lost the entire primary education market to Google; this is the biggest existential threat facing Office today. This isn't an immediate concern, but young people are growing up using Google products instead of Microsoft products. As this generation enters the workforce and starts earning corporate leadership positions, attitudes towards Office will shift.

Microsoft recognizes this issue, and has launched an initiative to push Office in primary schools. The biggest push has making Office 365 including Teams free for all schools, prioritizing usage and mindshare above short-term profits (Microsoft Education, 2019). Other pushes have come from developing software specifically for education; Microsoft has released a Teams plugin that offers assignment turn-in and grade tracking functionality (Microsoft Education, 2019).

Note: I was unable to find good sources on Office vs G Suite usage in high schools, so this next section is primarily from personal experience and the experience of my classmates. This is consistent across at least 6 people and 7 states.

Many articles on education strategy stress the importance of hardware, pitting Google's Chromebook initiative against Apple's iPad initiative, and calculating the market share of school devices. However, the hardware and OS isn't as relevant as it seems; regardless of platform students overwhelmingly prefer Google's software.

The selling points of G Suite are the seamless saving and collaboration. While Office nominally has OneDrive syncing and collaboration via Office Online, these features are clunky and require additional steps to use relative to their Google equivalents. Additionally, Google has a stronger brand reputation, thanks to the ubiquity and quality of Google Search. Among young people Microsoft products are perceived as clunky and frustrating to use.

Future Strategy – Education & Gen Z

Reasoning:

Microsoft's strength is in reliable products and corporate sales, while Google's strength is in popular free consumer software. Microsoft should play to its strengths, conceding the primary education market to Google, and focus on converting people as they enter the workforce.

The actions that Microsoft has already taken in primary education (free Office, Teams plugins) are good steps but have had limited impact. Microsoft should continue these initiatives, but focus future efforts on its business offerings.

If Blackboard still existed as the primary college software offering, I would suggest that Microsoft enter the college space by developing their own college software solution, adding good integration with Office online, and then offering this solution to colleges at a steep discount. Blackboard primarily retained control by purchasing any startup that dared challenge them, and so Microsoft would have had the resources to ignore the pressure and a solution to market. However, Blackboard's control has been slipping, and the market is now competitive enough that I no longer recommend this option.

Office needs to convert young professionals as they enter the workforce, before they reach decision-making positions within major corporations. Microsoft's best bet here is investing in Office's collaboration tools to negate G Suite's primary advantages

Microsoft has already attempted to accomplish this through Office Online, which offers a similar experience to Google Drive (free in browser apps with collaboration). However, the Office Online is experience buggy, leading to frequent disconnects and user frustration. We tried to use Excel Online to organize Microsoft intern events and ended up switching back to Google Sheets because it was better software.

The technology behind online collaboration isn't that new or difficult; the startups that became Google Docs had functioning technology over a decade ago. The problem that Microsoft faces is in ensuring backwards compatibility. Excel Online has huge suites of regression tests. The department must verify that all spreadsheets have absolutely identical behavior between the desktop version of Excel and the online version. This policy, and others like it, contribute towards the industry perspective of Microsoft as reliable and trustworthy, benefitting Microsoft in the long-term. At the same time, they tie down innovation and create a perception of Microsoft software as "old and clunky".

Future Strategy – Education & Gen Z

Implementation:

Office should copy the success of Microsoft's Visual Studio Code, and release new lightweight applications built from the ground up with modern technologies while continuing parallel development on the old applications.

These new applications should be browser native, should sync automatically with OneDrive, and should support a seamless collaborative experience.

(Story Time ~ Visual Studio Code)

Developer Division (or DevDiv) at Microsoft produces programming languages and tools that are used by software engineers within Microsoft and are also licensed to external companies. Their flagship product, Visual Studio, was decades old and contained so many features that it had become slow and clunky to use, and was developing a negative reputation in the industry.

In a bid to refresh their brand and prove that Microsoft is capable of making excellent software, DevDiv began building a free lightweight version of Visual Studio. This new tool was called Visual Studio Code (or VS Code for short), and has been an incredible success. In the most recent StackOverflow developer survey, VS Code was listed as the most popular IDE industrywide at 50% usage, with old Visual Studio in second place at 32% usage (Stack Overflow, 2019).

One driver of VS Code's success has been its availability as an open source project. Users frequently modify VS Code to add their own features, and publish these features as free extensions creating a massive library of functionality. New users can install the subset of features they need and no more. Open source worked for VS Code because all its users are programmers and able to contribute to the project. This open source model would work less well for a Microsoft Word equivalent, but might be decent for the Excel equivalent.

Future Strategy – Education & Gen Z

Timeline:

Since the timescale on the education market is measured in decades, actively dissolving an existing division to free up developer resources would be too disruptive. I would advise waiting for old divisions to expire by natural causes, and then re-assigning the teams onto the new projects.

Microsoft's two newest apps (Teams and VS Code) are both Electron apps, which means they are effectively self-contained Chrome webpages. The new Office apps should also be based in Electron, because Microsoft now has good experience and proven results with the technology. The time-to-market for both VS Code and Teams was a little under a year, this is from project kickoff to first publically available version. However, the initial VS Code functionality was very bare-bones (just text editing and extension scaffolding), and the Teams backend was copied over from Skype for Business. I'm using the times for those apps as estimates for the frontend work only.

Work to be done (1 team = 10ish developers & 2 product managers)

- Collaboration and Syncing backend (8 teams for 2 years)
- Word front-end (5 teams for 1 year)
- PowerPoint front-end (8 teams for 1 year)
- Excel front-end (8 teams for 1 year)

The final schedule would be staggered. Initial development of the Word frontend should begin early so they can check the work of the backend team. As portions of the project reach completion, some of the teams can be pulled, though maintenance is still needed.

Year 1: Backend (8 teams)
Year 2: Backend (8 teams), Word (5 Teams)
Year 3: Backend (3 teams), Word (5 Teams), PowerPoint (5 teams)
Year 4: Backend (3 team), Word (5 team), PowerPoint (8 Teams), Excel (8 Teams)

This timeline would take 4 years until launch, and cost around $290 million. These new apps would refresh Office's brand and prove to young professionals that Office can meet or exceed G Suite's functionality, solidifying Office's dominance within the productivity tools market for years to come.

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Appendix:

What is Slack?

Slack is an office communication platform, loosely based on IRC channels. Slack has a number of "channels" which function as message boards. Channels are generally arranged by purpose: a company might have a general channel, and then separate channels for each team or product group, and some casual channels related to hobbies or cute cat pictures. Employees subscribe to a subset of channels, and receive notifications about new posts in those channels.

By replying to a post, users can start temporary side conversations called "threads". The thread becomes detached from its channel; only thread participants are notified about new posts. These side conversations often last only a couple days, whereas channels are generally permanent over to course of several years.

What other Slack alternatives has Microsoft tried?

Microsoft has long suspected that a better alternative to email exists. Back in 2012, soon after Facebook went public, Microsoft purchased Yammer for $1.2 billion. The promise of Yammer was as an "enterprise social media network", the creation of online community within an organization. Yammer was met with lukewarm success. People used it, and it was useful, but unlike Slack, people don't lovingly advocate for Yammer when starting at a new company.

The second Microsoft attempt was Skype for Business, which was a major overhaul and rebranding of their old Microsoft Lync product. Skype for business supported instant messaging, video chats, and alternate forms of communication. New features were added to Skype for Business over time, including persistent group chats reminiscent of Slack channels. Again, Skype for Business was decent but not revolutionary.

Microsoft Teams is the company's third attempt at meeting this business need, and it seems this time it's a success. Teams copied many ideas from Slack. Both have similar message feeds and thread-based reply chains, both organize messages into "channels", and both are built on Electron (note: Microsoft now has ownership of Electron via the Github acquisition).

Internally, people have been surprised by the speed and forcefulness of the pivot to Teams. I would estimate Microsoft is spending roughly $200 million of developer effort per year on the project, and from a strategic perspective, it's money well spent.

Is the Office leadership team good?

Yes, employees love Rajesh and his team; morale is high.

Would PowerApps in Office actually help?

Image this dialogue:

Frustrated Accountant who's also a decent programmer: "I was waiting for approval on X tool, but I never heard back, so I just went ahead and made it in PowerApps."

Management: "Ooh that's really useful, I think we should start building on top of this."

Repeat this a couple of times, and most the people making technical decisions will have exposure to and experience with Azure.