1. Describe Alibaba’s business model and explain the role of automation in enabling it. (15%).

Being one of the world’s biggest IPO, Alibaba strive to “foster the development of an open, coordinated, prosperous e-commerce ecosystem” (2). Thus, to reach its goal, Alibaba created platforms globally and domestically in China to allow buyers and sellers to have the best experience possible. Alibaba’s scale is gigantic -- it owns about 20 services worldwide with about 6 services focusing on e-commerce alone (5). Thus, to analyze the business models of Alibaba in detail, this report will specifically focus on how it operates in Mainland China.

**Business Model – goal (business strategy, what they do to succeed)**

Some say Alibaba is similar to eBay’s online auctions model where they create a community of buyers and sellers and use auction-style process to sell products, however, although Alibaba’s core system is creating online purchasing platforms, they do not have a broker between purchasers and merchants. Instead, they let the sellers to set the price and negotiate with the buyers. For example, one of Alibaba’s biggest site, Taobao demonstrates this strategy. Taobao is the highest earning company under Alibaba with over 617 million monthly active users. However, instead of using similar business model like Ebay, Taobao is for small vendors where anyone can register and sell their products. Furthermore, Taobao does not charge commission fees on transactions or postings, instead, the vendors can choose to pay to place their product higher in search results (https://www.ncrypted.net/blog/how-does-alibaba-work-insights-into-business-model-and-revenue-analysis/). Another big business under Alibaba is Tmall. Unlike Taobao, Tmall is for big, branded companies such as Gap and Apple. It targets China’s growing middle class with these notable brands to attract more buyers (<https://www.investopedia.com/articles/investing/121714/how-does-alibaba-make-money-simple-guide.asp>). Tmall operates on a slightly different system than Taobao, it charges the big companies a yearly membership fee to make profits (<https://www.investopedia.com/articles/investing/121714/how-does-alibaba-make-money-simple-guide.asp>). To correspond with Alibaba’s big e-commerce industry, Alibaba also has a online payment system similar to PayPal called Alipay. Customers using Taobao and Tmall can use purchase items easily by just typing in their password to Alipay. Hence, Alibaba provides multiple services to ensure their e-commerce market has all the ingredients it needs to make shopping more convenient and efficient. Similar to what their vision said, Alibaba “provides all the resources…that an online business would need to succeed” (2).

**Value-Chain**

Inbound/Operations/Outbound Logistics - Alibaba does not make its own products, instead, they connect suppliers directly to buyers using services such as Taobao and Tmall. Once the buyer decides to purchase the product, the supplier can then decide to use one of Alibaba’s partner shipping to ship the product or contact their own delivery services depending on the price and location. If the supplier chooses one of Alibaba shipping service, they can fill out the form with order number and ship their product. Alibaba has good relationship with 14 major delivery services who delivers 5 million packages. In May 2013, Alibaba formed a joint venture with five major express delivery companies in China known as China Joint Logistics to improve the delivery service. Once the product is sent, it’s similar to a parcel service.

Marketing and Sales - Alibaba allows sellers to purchase search result that make them appear first in searches, thus allowing sellers to promote their products. Aside from attracting buyers for sellers, Alibaba also attracts its own customers by advertising. One of the biggest advertisements for Alibaba is by using viral promotion that uses customers to promote the service through means such as word of mouth and friend recommendations. Alibaba also advertises through social media such as Weibo, which is the biggest social media platforms used in China. For example, before each year’s “Singles Day” sell, Alibaba often display various promotions and sells for different brands on social media to attract buyers.

Service - After a product is delivered, the customer can still communicate with the sellers to return or exchange products through Aliwangwang. From Alibaba’s special features, they can also leave comments of the product on the website for other customers.

**Automation**

In order to ensure its business perform more efficiently, Alibaba uses AI and big data to develop different algorithms to make important decisions. Specifically, Alibaba uses data from the markets to develop competitive strategies and sales efforts, which allow them to learn more about customer habits and uncover developing trends (https://www.datameer.com/blog/three-ways-chinese-industries-use-big-data/). According to the article from Ming Zeng, most “operational decisions are made by machines, allow companies to adapt…to changing market conditions and customer preferences, gaining tremendous competitive advantage over traditional businesses” (3-4). To achieve this, data scientists create probabilistic prediction models with huge amounts of data to produce better decisions, then use it for the basis of business decisions. For example, Ant Finance uses a machine learning algorithm to determine who to lend the loans to. Their algorithm evaluates how well a business is performing by looking at their transaction data, its competitive offerings, and whether its partner has high credit scores (4). Using these data, Ant then decide who to lend loans to while improving the quality of their decisions in real time. Another way Alibaba uses big data is in Tmall. Alibaba captures live data with each customer interactions to feed the AI-algorithm that recommends products to shoppers as well as communicate with supplier to either increase or decrease inventory based on demands. This helps suppliers to keep a low inventory which reduces holding costs and saves spaces. Aside from using disembodied AI, Alibaba also has embodied AI such as robots to make packing more efficient. According to Forbes, Alibaba has more than 200 robots in automated warehouses where they process 1 million shipments each day. This makes packing more efficient and accurate which reduces errors and develop faster deliveries (<https://www.forbes.com/sites/bernardmarr/2018/07/23/the-amazing-ways-chinese-tech-giant-alibaba-uses-artificial-intelligence-and-machine-learning/#4adb789f117a>)

1. Does Alibaba demonstrate operational effectiveness or strategic positioning? Why? (10%) (what they do that’s better and unique compared to other companies? I talked about a lot of factors…) (competitive advantage)

While there are many e-commerce giants in China such as Amazon, JD, and Pinduoduo, Alibaba demonstrates operational effectiveness with its unique business strategies and the wide variety of services it offers such consumer-to-consumer market, and its integrated e-commerce systems.

Most e-commerce markets, such as Amazon, JD, and Pinduoduo focus on business-to-consumer model where they only allow big companies to enter their markets. However, Alibaba’s Taobao is a consumer-to-consumer platform where they allow individual sellers to post their products online, giving the customers more variety to choose from. Thus, the convenience of having more products and the easy feeing of talking to someone who is less intimidating than brand sellers promote their services.

Another factor that makes Alibaba unique is the reliable credit model they implement. Unlike Amazon where they charge your account once the item enters in the shipping process, Alibaba charges customer after they confirm the delivery of their product. Thus, this gives costumers more assurance of purchasing online and using the platform, knowing that their products are guaranteed to arrive and no false charges will be placed (<https://www.amazon.com/ask/questions/Tx2S63C61R8K1ZQ/>?). Alibaba also validate their third-party sellers by requesting them to pass an online certification test, preventing any illegal transactions and fake products.

Alibaba is also very strategic in taking advantage of business opportunities. For example, the “Single Day” phenomenon was originally created by students in university for celebrating being single. However, Alibaba saw that opportunity and transformed it to one of the biggest shopping events of the year. Think of Valentine’s day, birthdays, anniversaries, Christmas, etc. The twist is that on Singles’ Day, you buy a gift and give it to yourself! From Alibaba’s perspective, it also helped to fill the gap between China’s Golden Week national holiday in October and Chinese New Year in late January/early February.

Alibaba has an integrated e-commerce ecosystem. Unlike other companies who only offer the online shopping platforms, Alibaba offers a chain of service including Aliwangwang to allow customers communicate with sellers, Ali Pay that ensures customer can purchase item securely, and other partnerships with delivery systems that make it easier for sellers to send out products. This integrated e-commerce ecosystem gave Alibaba many opportunities to invest and attract users. According to Ming, “The more we build the open system, the more we benefit, and then the faster the ecosystem grows and we become more inclined to this new approach.” (<https://hbr.org/ideacast/2018/09/how-alibaba-is-leading-digital-innovation-in-china.html>)

(<https://www.digitalcommerce360.com/2016/07/27/seven-reasons-alibabas-success/>).

1. Explain how the IS strategy triangle was applied by Alibaba. Support and justify your explanation. (15%)

Alibaba, like many other businesses, uses people, process, and technology to develop their leadership in the world. Alibaba’s business strategy is clear: to “foster the development of an open, coordinated, prosperous, e-commerce ecosystem” (1). In order to reach its goal, Alibaba needs to maintain multiple services that make online shopping easy. With their integrated system, Alibaba strives to make e-commerce more convenient, efficient, and friendly to both buyers and sellers. Thus, they develop a system that make e-commerce more efficient.

To support their business strategy, Alibaba uses information strategy to collect data and build algorithms that help sellers to promote their products, thus helping Alibaba to make profit. Like Jack Ma said, “large-scale computing and data are the father and mother of artificial intelligence”, and Alibaba has both (<https://www.alizila.com/wp-content/uploads/2017/06/Alibaba_AI_infographic.jpg>). With one of the world’s largest computer server to run its e-commerce industry, Alibaba’s operating system can process 175,000 transactions per second, allowing them to process user’s request efficiently, making the e-commerce market more convenient for the users. Aside the big-scale computing, Alibaba also collects huge amounts of data through its 500 million active users across its websites. Using these data, Alibaba can then analyze in real-time and make accurate predictions of what the customer want based on previous searches, online browsing, and comments. This allows merchants on Tmall to forecast product demands and determine the right products and price to offer. In order to make e-commerce more fit to personal taste, Alibaba also developed personalized pages for their virtual storefronts. Based on the customer’s age, gender, geographic locations and more, Alibaba generates personalized websites on Taobao and Tmall, this resulted in a 20% conversion rate on personalized pages during Singles’ Day compared to non-personalized pages (<https://www.alizila.com/this-is-how-alibabas-technology-drives-business/>). As Alibaba’s Chief Technology Officer Jeff Zhang points out, Alibaba’s AI advantage ““is that we have a lot of customers on a big platform…that’s all data we use to continuously train our systems and so the systems are becoming increasingly intelligent.”( <https://www.alizila.com/this-is-how-alibabas-technology-drives-business/>)

Alibaba’s organizational structure also supports its business strategy of producing all systems needed in an e-commerce market. With multiple partnerships in different areas, Alibaba strives to make the e-commerce market more effective. In 2017, Alibaba announced its partnership with multiple other delivery companies and formed Cainiao to build a global logistics network. With the smart logistics, Alibaba uses Cainiao’s technology to determine the fastest and most-cost-efficient delivery routes. This helps sellers to deliver their products faster, creating a better customer experience that satisfies Alibaba’s goal. With Cainiao, Alibaba makes 42 million deliveries a day with a 30% reduction in travel distances, saving money for gas and making delivery more efficient. More recently, At Yunqi Conference 2018, Alibaba announced its partnership with Intel to collaborate on the “digital transformation in China” with aspects such as edge computing, internet of things, and mobility. As Simon Hu, president of Alibaba Cloud announced, they “are confident that [their] clients worldwide will benefit from the technology innovation that comes from this partnership” (<https://venturebeat.com/2018/09/20/intel-and-alibaba-announce-cloud-partnerships-at-yunqi-conference/>)

Hence, with the help of their technological strategy that collects millions of data each day to appeal more to buyers, and their organizational strategy that combines their expertise with others to create tremendous achievements in its business, Alibaba has built a strong foundation for its business strategy of creating an integrated e-commerce system that coordinates with other sectors, opens for more development, and supports buyers and sellers.

1. Apply Porter's Five Forces framework to analyze Alibaba’s competitive strategy based on the information provided in the case and other available information about the relevant industry (globally or in Asia). Your discussion must clearly analyze each of the five forces and also identify how Alibaba has used (and could use) IS to gain a competitive advantage. (30%)

Industry rivalry – Aside from Alibaba, there are many other big firms such as Pinduoduo and JD who are also in the online shopping business, creating vigorous competition in the field. However, Alibaba successfully differentiated itself from the rest of the firms by having an integrated system and a unique business model. The majority of China’s other big e-commerce companies, such as JD which is ranked right after Alibaba, uses a business-to-consumer model(<https://www.fool.com/investing/2018/03/13/the-3-biggest-misconceptions-about-jdcom.aspx>). Thus, they need to spend more time monitoring big businesses to decide which merchants to include on their website, and they need to maintain their relationship with current businesses to make profit. Thus, instead of focusing on customer experience, which Alibaba scrutinizes in, B2C platforms allocate big portions of their time analyzing the merchants instead of creating ways to improve customer shopping experience. Furthermore, B2C markets often do not offer a long-tail of products. Since merchants want to promote their newest items, it is hard for customers to find, thus, it gives customers a limited amount of selections to choose from. Unlike JD or Pinduoduo, Alibaba’s business model contains both consumer-to-consumer, like Taobao, and business-to-consumer, like Tmall. Their variety in business models help satisfy buyers who want newest products from companies and those who are looking for other products. Having a C2C model creates a long-tail of product offerings. Since ordinary sellers do not need to always offer the newest product, they often sell whatever they have in their hands, creating a wide variety of products available online. Thus, buyers who need a specific item that is not offered at anywhere else often resort to Taobao. By creating C2C platform, Alibaba can further focus their attention on customer experience instead of trying to maintain good relationship with big merchants. This allows Alibaba to create an integrated system that satisfy buyer’s needs in an e-commerce industry, motivating them to establish Alipay, Aliwangwang, and many more to better customers’ shopping experience.

Threat of entry – Since Alibaba has already developed a big economic scale and brand, it is difficult for any small business to enter and immediately threaten Alibaba’s business. With over 500 million active users, Alibaba gather tremendous amounts of data every day to strengthen its company. Furthermore, as a global leader with markets in China and America, Alibaba’s international market is difficult for new entrants to replicate. Lastly, with Alibaba’s big brand and scale, it attracts million of customers each day, making it easier for Alibaba to make profit, which in turns help them attract more users and more scale. This network effect of Alibaba helps it to stay in power as the leader of e-commerce. Specifically, Alibaba is a two-sided market with merchants and buyers that benefit from each other. This positive-feedback loop helps Alibaba to monopolize the e-commerce industry in China, making it hard for new companies to enter. Thus, Alibaba’s global connections, enormous database, and large scale network effect prevents threats from new entries.

Threat of substitutes – Instead of going to a physical mall or renting items, many customers prefer Alibaba because of its cheap price. In physical retail stores, merchants often need to consider rent, employee paycheck, and other factors which can drive price higher. However, since Alibaba operates a C2C model and does not charge any commission fees, sellers can sell their product with cheaper price compared to actual retail stores, thus attracting more users to buy from online. Furthermore, merchants also like to sell on Alibaba because of the direct transaction that maximizes its profit. Thus, Alibaba attracts both merchants and buyers, which create a growing market that invite more people to join. (<https://drudesk.com/blog/consumer-to-comsumer-c2c-ecommerce>)

Bargaining power of buyers – Aside from Alibaba, buyers have many other choices such as JD or Pinduoduo. To prevent users from leaving Alibaba, Alibaba created databases that keep track of each user’s interests through their search history, comments, and view history. Thus, Alibaba can recommend specific products to users using its AI algorithm to fit the user’s preference. This recommendations are highly valued by customers as they can easily find something they like. Furthermore, this increases the switching cost for customers as they have to start over to build their profile with a different company. Furthermore, Alibaba’s integrated system also adds to the switching cost. If customer saved money in Alipay, they cannot use JD or others because Alipay is only for purchasing with Alibaba. Thus, they are less motivated to switch because it takes time and effort to switch the money out from Alipay. Thus, Alibaba’s enormous data and its payment system prevent users to switch to another company.

Bargaining power of suppliers – Since Alibaba operates a C2C market with Taobao, the suppliers are the sellers. To keep their sellers, Alibaba charges no commission fees so anyone can start a virtue store easily. Furthermore, with its two-sided network, Alibaba provides the sellers with more benefits. Sellers are attracted to Alibaba because of its big customer base, and Alibaba wants more sellers to gain more customers. Thus, the two-sided network keep sellers in Alibaba.

1. Discuss what Alibaba, should make a priority going forward. Research and develop a list of three most critical IS-related challenges currently facing Alibaba and your propositions for how each challenge needs to be addressed by Alibaba. (15%)

Although Alibaba is currently the world’s leader on e-commerce, it still has multiple challenges that must be addressed. One challenge is the continuous problem of selling counterfeit goods on the market. In 2015, Beijing’s Xinhua news agency reported that 40% of China’s domestic e-commerce sites were counterfeit goods (<https://www.forbes.com/sites/wadeshepard/2018/01/26/if-beijing-listened-to-jack-ma-hed-be-going-to-jail/#589dba7e49e3>). Hence, the fake products bring bad reputation to Alibaba, turning customers away from the platform. Thus, to prevent sellers from selling counterfeit products, Alibaba can implement a database system that tracks where each product comes from. It can require sellers to fill out forms that demonstrate where and when they purchased items, including the serial numbers and contact information with the factory or merchants. Then, before seller publish their item on the market, Alibaba can use the information in the database to track down the item’s origin and make sure it is valid. Hence, this can reduce the percentage of counterfeit goods sold on Alibaba, attracting more customers to buy authentic goods.

Another problem with Alibaba is the fake reviews of products. Often, sellers will bribe customers to leave positive reviews or negative reviews in exchange of some discounts or giveaways. This causes many bad-quality items to have good reviews, increasing their visibility and attracting more customer to purchase, and good-quality goods with bad reviews to decrease competition between sellers. However, the buyers often feel scammed after receiving products with quality lower than their expectations, causing their trust in Alibaba to decrease. Thus, this harms Alibaba’s business as buyers turn away due to loss of trust, moreover, it drives away good merchants who sell quality items as their visibility is taken over by the fakes. To solve this problem, Alibaba can implement a system that detects seller’s reported abuse. Many sellers, after getting unfair bad reviews, will report their problems to Alibaba. However, with so many other reports, their problems often get lost among the rest. Thus, Alibaba can implement a system that detect these complaints by noticing keywords then assign human agents based on availability to assist these sellers. In order to establish these, Alibaba can use AI and example reports to train the system to recognize these keywords. Then, the system can be fed with the schedule of employees to pair available assistant to the seller. In this way, this can help sellers to prove their item’s quality and reduce the number of unfair reviews. Furthermore, Alibaba can implement a stricter verified purchase to ensure the buyers actually bought the item before reviewing. This can be implemented as a verifier that enables user’s comment function for that product strictly after they paid, and the product is delivered to their homes. Hence, this prevents anyone from reviewing product without purchasing, thus reducing “incentivized comments”.

One last problem Alibaba faces is the expansion of its international market. Currently, Alibaba wants to develop its market to other countries in India and Australia. Hence, Alibaba must find products that satisfy potential buyers taste to succeed internationally. In order to do this, Alibaba should attempt gathering data of the potential customers. Since different regions have different culture, customers in India or Australia might not like the same products as customers in China. Thus, Alibaba must find out what their potential customers want before fully implementing their market. Alibaba can do so by collaborating with other e-commerce companies to collect data on consumer’s clicks, viewing histories, and comments. In this way, they can gather evidence of the interests of international customers. After Alibaba collect enough data, they can use their AI algorithm to divide the customer into different groups and uncover what each group of customers is interested in. Then, when Alibaba launch their international market, they can immediately recommend items that fits the group’s need, reducing time wasted to guess what they would buy.

1. Propose one IS initiative/solution that could maintain and improve Alibaba’s strategic position by 2025.Provide a feasibility study in support of your IS initiative/solution. The feasibility study should, at least, describe: technical feasibility (e.g. any considerations Alibaba must make with regard to buying, building and/or enhancing existing technology); economic feasibility (e.g. a discussion of costs and Alibaba’s ROI expectations); and schedule feasibility (e.g. estimated target for completion and attainment of benefits). Justify why this is important for Alibaba to adopt and include possible risks of not adopting such an IS initiative/solution. (15%)

As mentioned earlier, Alibaba should develop a database of all customer’s interest in the international market before and after launching the platform in Australia and India. To do this, Alibaba should use a Customer Relationship Management System to keep track of all interactions. Before implementing the platform, Alibaba should use the system and data to estimate what the potential customers wants and import just those items, thus giving them a head-start in the business. After the launch, Alibaba should maintain this system with new and updated data from customer searches and viewing histories. In this way, Alibaba can reduce initial cost of guessing what the customers want and continue to make profit once they gather more data.

This solution is highly feasible technically as Alibaba already has a similar algorithm in-place for its Chinese markets. Thus, Alibaba does not need to buy new technologies to reuse this algorithm. However, since they are adding thousands of new data points, Alibaba might need to create more storage to store these data. Hence, they might need to expand their cloud storage to accommodate for all these new data. Alibaba can achieve this by expanding their own cloud or renting cloud servers from other providers. In either cases, this should be easily achievable.

Unlike technical feasibility, Economically, this solution might cost Alibaba more than expected. In order to gain information on customer before launching the platform, Alibaba should partner with some local companies to acquire these data by looking at their customer information and purchases. Since data is highly valuable information, partnering and buying data from companies can cause Alibaba a fortune. However, the return on investment in this case is high. Once Alibaba acquire some data on the customers, it can use its own machine learning algorithm to extrapolate more data points and estimate what the customer wants, which bring them more profit. Aside from buying data before the launch, Alibaba can maintain its own CRM, which is not very expensive. Thus, although Alibaba need to spend a big portion of money buying data, the amount of profit they will gain outweighs their initial spending, making this a feasible solution.

In terms of schedule, Alibaba should start buying data and starting the new CRM program months in advance of implementing the platform. In this way, it gives Alibaba enough time to gather information, analyze it with its AI, and coordinate the product to sell. Hence, if Alibaba wants to launch the market as soon as possible, this might not be a feasible solution. However, if Alibaba wants to launch a steady market, they should follow this model and allocate enough time to implement the CRM system. Once Alibaba establish a stable online market, it should continue updating the CRM system as long as the platform runs. In this way, they can collect more information on each customer and develop customized recommendations and pages to increase profit.

If Alibaba does not adopt a CRM system, they run the risk of losing millions of profits. Without CRM, Alibaba will not know what each customer’s interest is, thus they cannot provide accurate recommendations to tempt customer to purchase more items, causing them to lose opportunities at millions of profits. Furthermore, without any customer data before launching the market can cause Alibaba to spend thousands of extra dollars. Since different customers at different region have different preferences, without any customer data beforehand, Alibaba has to guess what the customers want by importing different products until they gain a large enough database to make accurate predictions.