

Management in Management: Utilization of the Digital Key for Alibaba Cloud

Tianyi Li*

Hongwen School, Qingdao, China

*Corresponding author: Skyee.li@hongwenfeh-qd.com

Abstract. In the era of big data, all traditional companies will carry out digital transformation under the leadership of managers. From a macro perspective, standing at the forefront of the development of the times, this paper proposes the concept of combining cloud database and management. On this basis, managers can become the pioneers of business in the new era and bring long-term sustainable development benefits to the company. Taking Alibaba cloud as a case, it is found that its biggest advantage is its far-sighted operation plan. Alibaba cloud helps managers make the most efficient transformation plan with sophisticated analysis and calculation logic and forecasts the potential market with the grasp of big data consumer data; all of these can help management to get a head start in the information age. In addition, this paper also proposes that Alibaba cloud management information base is suitable for discovering viral marketing dishes and cooperating with management for win-win results. These results shed light on guiding further exploration of corporation management.

Keywords: Management; Cloud; Viral marketing; Business in business.

1. Introduction

Driven by the development of technology, company managers are actively engaged in digital transformation. Despite all the talk about digital disruption, 70% of firm transitions fail according to McKinsey [1]. The fact that knowledge, trust, and culture are often ignored while technology receives a lot of attention is one of the main causes. By integrating change management into a digital transition, businesses can take advantage of the cloud's full potential. The business upheavals brought on by digital transformation are most likely to occur along three horizons: the digital core, novel business models, and new ecosystems. The value provided by the cloud will vary across these three horizons and be dependent on hyper automation and hyper engineering, which call for various human skill sets. Organizations must adapt to new norms and collaborative working styles for digital transformation to succeed [1]. As a product of the new era, cloud stores a large amount of consumer and market information data. Because of its sophisticated technology and high developability, cloud is indispensable for the management of the new era. Over the internet, computer services are offered by cloud computing. For businesses, this entails instant access to web-based programs, data processing, storage, and other services. Integration of cloud and business operations has emerged as a prominent factor [2]. Small organizations can gain a lot from working in the cloud, including improved collaboration, simple access, and quick turnaround.

Creating value beyond computing is the target for Alibaba Cloud which is a brand website that aims to lead the cloud computing industry. Financial services, retail, media, Cloud native, Alibaba Artificial Intelligence, data intelligence, and privacy protection are the six key features of the Alibaba Cloud website. As a result, the data resources of the current business are managed uniformly if Alibaba Cloud is able to combine the development of the middle-platform with the analysis of massive data. Data for high-level business is continually and iteratively derived. Data resources will grow overall in a systematic way, and their worth will continue to rise [3]. Therefore, it is possible for one to link this digital website as a key for successful management in the 21 century and in the future ought to be discussed .

As business competition becomes more and more fierce, ordinary management skills gradually lose their competitiveness [4]. Meanwhile, technology is developing rapidly, and smart managers realize that they need to hold the key to the database so as not to be out of date by changing times.

Since data drives the quick development of many different types of applications, including data resource management and index analysis, results are replenished to the platform as incremental data which can be accessed through services. In particular, thanks to the power of digital platforms, Alibaba Cloud uses the big data analysis tools in collecting information and choosing the most efficient way to help the manager make decisions [3]. Ambitious managers are no longer limited by managing staff and money, instead, the new generation of managers is opening up databases. This study will continuously research on how to make information technology capabilities contribute to firm performance. Using a conceptual model to connect the IT-enabled information management capability with three crucial organizational capabilities, they build on the previous study's findings and use three capacities to mediate the relationship between information management capability and business performance [5]. It can be seen that company managers begin to build a large information management database and develop new ways to master more information.

Therefore, management has two meanings here. According to the idea of business in business, it mentioned only if people do changes in order to achieve sustainable international, social and cultural development as well as economic progress. Then, the debate about the contribution that ought to be made by business is essential, though there is no specific rule for people whatever their job is to do changes or revolution [6]. Excellent managers should not be followers; instead, they should be pioneers. As mentioned in Business in Business, companies in the same industry should be competitors, but companies with foresight understand that resources are limited and cooperation can maximize benefits [6]. In this case, as management is an important part of business, it does not only require consideration of individual interests following the logic of successful business. Management should go beyond knowing how to manage the internal order of a company, e.g., the way to manage good people and money. Instead, a successful leader should obtain the ability to predict the trends of the industry in order to make the right decisions for the long term benefits of the business.

As a successful manager, they should be aware of the information of the target consumers well so that the manager could lead the business to produce the right products which can meet their needs. In addition, the information base can provide information on the progress of peer competitors so that company managers can always use the latest technology. Therefore, if managers look at their work from a macro perspective, it is the key to victory in the information age that not only to become the dictator within the company.

The rest part of the paper is organised as follows. Sec. 2 will present analysis on management use existed function of Alibaba Cloud which leads to a new dimension of new era management. Sec. 3 will introduce the Alibaba Cloud advanced technology and operation concept, and win-win concept of cooperation with management. In Sec. 4, the study shows management using Cloud to achieve viral marketing with low risk and high return.

2. The Link between Cloud and Management

For digital transformation, cloud management is the key to help enterprises achieve digital transformation, rather than building data centers and replacing old hardware and equipment. The work efficiency and productivity of enterprise departments can be improved via adoption of the cloud collaboration platform. With the application of digital technology, enterprises can optimize operational processes, maintain business agility, save costs, and quickly adapt to the market so that enterprises can grow steadily and move towards sustainable operation [7-10].

Information changes rapidly in the market. To seize the opportunity and become a powerful enterprise that can monopolize the market, managers need to master a large amount of data and rich experience. Cloud database can help managers summarize past experience, including the company's budget for each department, to achieve the effective use of resources. For the sales analysis of existing products, Cloud can help managers compare the data of competitors in the same industry, draw on the strengths of managers in the same industry through precise analysis and calculation, and make up for the deficiencies of their own companies. In particular, Cloud can also predict the future. In the

traditional concept, companies in the same industry must be competitors, but with the help of Cloud, managers will not be limited by the interest competition at this moment, and they will be able to take a long view, cooperation between companies in the same industry may be the best result. Since companies in the same industry share resources, there is no company without loopholes, and competitors in the same industry are often the most familiar with our market and consumer habits. If a single company monopolizes the market, it will not dominate the market for a long time. On the contrary, if managers skillfully use Cloud, they will have tools to predict the future. Therefore, managers can compare the advantages and disadvantages of their own development and gain win-win cooperation with peers and make decisions that are most conducive to the long-term development of the company.

The article chooses Alibaba Cloud as the best choice for the manager to use for the digital transformation. In Gartner just released 2018 database magic quadrant (international research institute Gartner is a very authoritative institution), Alibaba Cloud with the domestic database market share of the first identity was selected into the "visionary" quadrant, has become a "dark horse". This is also the first time a Chinese vendor has been included in Gartner's Magic Quadrant since it was launched in 2013 [11], which is significant. It not only shows that Ali Cloud has become a top player in the global cloud computing market, but also shows that China's database service manufacturers have the qualification to compete with the world's top manufacturers.

In the 2017 global public cloud market share report, Ali cloud ranked the third in the world. In addition, Ali cloud is the world's top three only Chinese cloud, on behalf of China to win the right to speak in the international cloud computing market, in fact, this "only" is very telling [11]. DTS, the data migration service of core technology products, realizes data synchronization of remote data centers and solves the problem of data consistency among multiple living objects. Alibaba has a database with independent intellectual property rights, which is also the world's first distributed relational database applied in financial business. In general, Ali Cloud has the core technology, has occupied the global market, and has established cooperation with many countries.

3. Alibaba Cloud leads informatization of the business: CloudOps DevOps

The computing architecture used by the Alibaba cloud enables a range of computing scenarios. A variety of big data products are available to meet various business objectives, including rule-based engines, recommendation systems, BI tools, etc. [6]. Through previous research, Alibaba Cloud can solve the potential problems that may appear in the operation of the company through advanced technology and put forward the most efficient solutions. If a manager can have decisive judgment ability and mature risk control ability in the face of emergencies, there is no doubt that this manager can have a solid position in the industry.

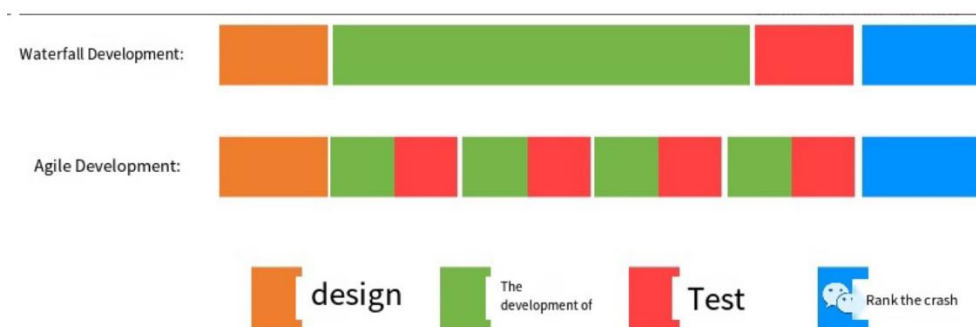


Fig. 1 The waterfall and agile development.

CloudOps is an extension of traditional IT operation and maintenance and DevOps. It realizes the re-evolution of operation and maintenance through cloud-native architecture, which fully helps

enterprises reduce IT operation and maintenance costs, improve delivery speed and system flexibility and agility, enhance system reliability, and build more secure and reliable Open business platform. Development (application/software engineering), technical operations, and quality assurance (QA) departments can communicate, collaborate, and integrate more easily thanks to a set of processes, methodologies, and tools called “DevOps”. As shown in Figs. 1 and 2, the early model of software delivery was called the “Waterfall model”. In short, waiting until everything was done at one stage before moving on to the next. As time goes on, the demands on the system from the users continues to increase, and at the same time, the time period given by the users becomes less and less. In this case, the cumbersome slow waterfall development is no longer the time. Enter Agile Development.

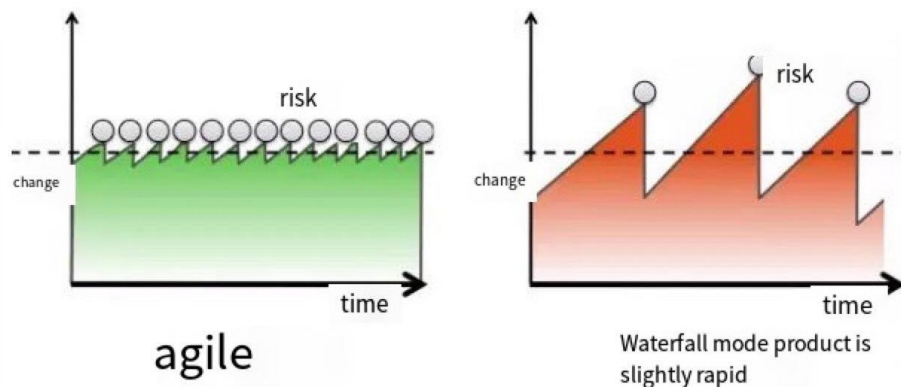


Fig. 2 The agile and model construct evolution.

To add more value, CloudOps must naturally combine DevOps with the cloud rather than simply being pure Cloud + DevOps or DevOps on Cloud. To recap, Alibaba Cloud employs a cloud database to show how different sectors and products connect [12, 13]. If managers master these information bases and use creative thinking to sensitively discover the connections between various industries, as a result, in the face of various emergencies, managers can make outstanding and different decisions. Through the accurate analysis of the advantages and disadvantages of big data, the past management experience is analyzed and summarized. For the management of internal companies, managers can use Alibaba cloud to record the most effective ways to motivate employees and the most appropriate wages. The basic information of each employee is recorded by big data. Therefore, if there is an emergency within the company, managers can effectively and directly solve the problem through this convincing information.

If one simply distinguishes company management and Alibaba database, they are two completely different industries. However, due to the development of The Times, their relationship has become inseparable. Managers want the company to realize the digital transformation, to improve management efficiency and finally help the company to obtain maximum benefit as a result. Nevertheless, managers must face the reality, as it is hard to realize digital transformation in the short term. Due to the lack of digital experience managers are likely to pay a lot of cost and time.

Therefore, Alibaba Cloud is the most effective way for managers to carry out digital transformation. Alibaba Cloud can provide transformation training for companies through mature Cloud computing ability and experience, so that managers can have data control ability faster. Meanwhile, Alibaba Cloud needs a lot of money if it wants to implement DevOps. DevOps needs cloud, and the cloud needs it, too. Having one without the other means one doesn't get the full potential of either. In the same manner, the cloud needs fast and agile development as offered by DevOps [14]. However, if the writer finds an emergency that enterprises can do and fund DevOps, or do and fund cloud migration, they may not be able to afford both [15]. As a result, in the business ecosystem, managers and Alibaba cloud coexist mutually beneficial. They each take what they need, and their relationship is inseparable under the connection of interests and data. The most distinctive point between Alibaba cloud and other clouds is that Alibaba cloud is more suitable for traditional managers. The platform

will formulate a detailed data transformation plan for the company. Compared with other clouds, even though they have outstanding technologies, they only improve their internal systems and do not expand the potential commercial possibilities. It will be undoubtedly a waste. For Alibaba cloud, it has the courage to innovate to improve the level of the database, provide managers with more precise, accurate, complete and high-quality high-level business analysis, and, at the same time, they will get a large return by helping the manager company. As a result, Alibaba cloud can use this money to achieve the common progress and development of CloudOps and DevOps, and make influential contributions to digital processing technology. Alibaba cloud will therefore have more advantages.

4. "Petri dishes" for managers to conduct Internet viral marketing

An instance of the network communication effect is the core of viral marketing. Even if computer and internet technology has advanced, they still cannot faithfully replicate the true situation in social reality. Marketers must perceive and judge, and data only serves as a small part of the feedback and validation of perception. Depending on whether our items include a "virus," it is referred to as viral marketing. Then, after identifying vulnerable individuals, their weaknesses, and how to exploit those weaknesses. They are willing to spread the disease [16]. Viral marketing needs to master a large amount of information about target consumers. If one doesn't understand the form of the internet as a delivery platform, it is likely to bring a negative impact to the company. Ordinary managers may choose viral marketing because they hope that their products can brainwash consumers, thus providing benefits for the company because of the herd mentality. However, in terms of the idea of management in management, ordinary managers do not realize that the internet is a double-edged sword. If they do not understand consumers' living habits and social relations in advance, the wide spread of the Internet and overwhelming advertising will bring negative effects to products and lead to the decline of the company's reputation. Therefore, viral marketing should be used by managers for appropriate purposes. Before such activities, managers should be clear that the purpose of viral marketing is to make consumers believe in the company's products imperceptibly and improve brand image. For example, viruses, their marketing can become the propagandist of company products without consumers' awareness. As a result, managers need to cooperate with reliable databases,

Managers hope that the companies they manage can produce perfectly competitive purchases to maximize profits. What was once a household commodity is now an achievable project thanks to the internet. Compared with ordinary Cloud, Alibaba has more advantages in long-term development. It discovered the connection between Cloud and commerce earlier and launched the function of cooperating with managers to analyze market consumers and predict long-term business potential opportunities. More importantly, CDN is a super large-scale distributed system that provides dynamic / static content, real-time streaming media acceleration, network security protection and other capabilities for various Internet apps and web sites. Online shopping, live broadcasting, music, games, social networking and other implementations are inseparable from it. Its peak number of requests exceeds 100 million times per second [17]. This is the somatosensory technology of the deep diving public's work and life, which is equivalent to breathing.

This technology has been in existence for more than 20 years. With the accelerated popularization of 5G, cloud computing and other new infrastructure, scenarios with large bandwidth, low latency and high concurrency continue to emerge, which promotes the continuous improvement of the whole network traffic and makes the CDN business volume and usage scenarios surge even more [18]. Now, China's CDN is in the development and transformation period. Driving edge computing, distributing cloud computing, cloud games and other services has become the more important mission of this technology in the new era.

Since 2014, Aliyun has officially provided CDN commercial services. As a global CDN service provider, Aliyun ranked the third in the world in market share in the report "MarketScape Evaluation of Global CDN Service Providers 2022" released by the international authoritative institution IDC. Aliyun is the only Chinese manufacturer selected, and plays an important role as a "Major Player".

Behind the excellence, Ali Cloud infrastructure has been rapidly expanding: By 2022, Ali Cloud has been deployed in the world more than 2800 edge nodes, the bandwidth output capacity of the whole network reaches 150Tbps, carrying more than 1.5 million active accelerated domain names worldwide, about 80% of the TOP100 websites/apps are using Ali Cloud CDN [19].

Alibaba Cloud's successful accumulation of CDN technology can show its familiarity with consumers on the Internet. For viral marketing, marketing promotion must have a clear and precise target positioning. Managers can find the potential market of commodities with the help of Alibaba Cloud's information base. If the target consumers are accurately found, the time for continuous trials in the early stage of viral marketing will be greatly reduced. Under the technical support of Alibaba Cloud, the cost of finding the market and target population for advertising will also be greatly reduced. In addition, in order to create a breakthrough and get attention for the company's new products, the marketing promotion must have a focal person or a focal evil event, but if the marketing effort is not properly handled, the brand's reputation will be damaged. For managers, it's as important to make money for the company as it is to build brand image and loyal customers, but with traditional viral marketing, it's more likely that you'll lose your reputation by making the wrong buzz. However, with the help of the Alibaba Cloud database, managers can rely on the professional platform that has a better understanding of the Internet, analyze the viral marketing of the same industry in the past, and integrate some points to design a set of viral marketing plan conducive to long-term development [20].

It is hoped that Alibaba cloud could become a "virus Petri dish", provide a smooth "transmission route" for managers' Internet marketing plans, let the virus grow and mature easily and efficiently, and find target consumers or social media, that is, those who are willing to carry the virus. Alibaba cloud is equivalent to an intermediary connecting the Internet and managers, using its rich database and experience, Virus marketing without damaging the company's reputation to achieve efficient management. Viral marketing is a common network marketing method, and its message transmission strategy is to copy information cheaply by the public and tell it to other audiences, so as to rapidly expand its influence. There are some insurmountable defects in mass media advertising. Since this communication is spontaneous among users, it is almost an online marketing method that does not require any cost.

5. Suggestions

As for overall planning and design of viral marketing program, Alibaba cloud already has services to help enterprises do network marketing planning. Virus marketing is a refinement and upgrade of existing technology. Alibaba cloud can provide managers with a complete and comprehensive virus marketing scheme through its existing experience in launching traffic platforms. Then, viral marketing needs unique creativity, and the attraction of viral marketing lies in its innovation. It is also crucial for managers to control the psychology of consumers. Innovation faces risks and high costs. However, with the help of Alibaba Cloud, it eliminates existing innovation points through big data, compares a large amount of data, and tracks down market vacancies.

Afterwards, it reasonably designs the information source and information communication channel of network marketing so as to use effective communication network for information communication; Ali Cloud believes that the speed of the network transmission of massive data is limited, and the fact that the way to move data with a physical hard disk, faster. There is a saying in the Internet industry that goes, "Never underestimate the bandwidth of a station wagon full of tapes speeding down the highway". While the physical migration approach may seem uninternet, it is the most practical way to deal with massive data uploads. Meanwhile, in order to ensure data security, Aliyun uses AES 256 end-to-end encryption algorithm, and the key is kept by the user. In terms of cost, this service is not as expensive as the outside thought. Taking 100TB data of medium-sized enterprises as an example, it takes one month to access the data through dedicated line, and the cost varies by hundreds of thousands. However, one "lightning cube" can hold 100TB data, and the overall transmission cost is

1/10 of the traditional way. "For startups that don't have a lot of data, it is also supported customers to move their data to the cloud by mailing a hard drive. Both the Lightning Cube "suitcase" and the mailing hard drive are moves by Aliyun to attract enterprise customers to use cloud services. Meanwhile, there are still a large number of enterprises using self-built data centers, or through the hybrid cloud approach to operate. Ali Cloud said that in the future, it will launch storage gateway devices deployed in the enterprise end to stimulate these enterprises to enjoy the convenience of cloud computing earlier. Finally, one ought to track and manage the effect of viral marketing. Alibaba cloud will track the virus marketing plan for a long time and constantly improve and change the marketing plan, because what management needs most is flexibility, and it can't respond to the rapidly changing market environment with a static method.

6. Limitations & Prospects

The price of Alibaba Cloud is relatively high. As mentioned above, the premise of win-win situation between Alibaba Cloud and management is sufficient fund. This is not a big difficulty for traditional enterprises with a good capital base. However, it is not suitable for small start-up companies to cooperate with Alibaba Cloud. Managers need to have their own plans for funds, and the development direction of the company should be decided by the managers themselves. Alibaba Cloud is more about helping companies break the bottleneck period of data transformation. It is easy to get on the cloud and difficult to get off the cloud. Especially with the advent of the cloud native era, many enterprises develop business systems based on cloud native applications such as pass and ipaas platforms provided by cloud platforms, and it is even more difficult to get off the cloud. If managers choose to cooperate with Alibaba cloud, they need to disclose the company's internal information to the cloud so as to make the most accurate marketing judgment and transformation planning. On the contrary, if the manager withdraws from the cooperation transformation process with Alibaba cloud, the data handed over to the cloud as a result will be recorded in the database, so it is difficult for the manager to completely interrupt the subsequent cooperation with the cloud.

7. Conclusion

In summary, this paper discusses the cooperation between management and cloud. Specifically, special perspective of management by the era of science and technology. Alibaba Cloud as a far-sighted platform can help manager to do the digital transformation in order to become more competitive and catch the potential business chance. According to the analysis, Alibaba Cloud's mature CloudOps, DevOps technology shows it is suitable to help traditional business to do digitization with the willingness to go into business to help manage. Moreover, the manager can use the digital key to predict for the market to become a pioneer and achieve win-win with the cloud by giving them financial support. At the same time, Alibaba cloud's ability to handle data and the Internet can stimulate new business opportunities to help managers make virus marketing plans. Nevertheless, manager still need to focus on the confidential work with company secrets statements to avoid the information was leaked during cooperation with Alibaba Cloud. In the future, management will not only on humans, the ability of controlling numbers will replace to become themain factor to decide who is the king of the management. Overall, these results offer a guideline for the prediction of future development for the management by using the cloud.

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