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3. Business 4.0-A Changing Face of Business

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ABSTRACT

As a new business is established or founded, it exercises a carefully crafted business model which describes a number of internal business processes, work architecture, production ways, profit maximization techniques, fraud detection and many other techniques. The core of the business model depends on determining the way in which the business delivers value to the customers, attracts customers to buy the services, and then converting it into profits. The intent of profit or loss reflects the assumption of the management about the requirements and needs of the customers. The key reason for any business to excel and flourish is to pin point how to fulfil the needs and demands of the consumers. In this paper, we will discuss about the latest business model, Business 4.0 in depth and look at its future prospective.

KEYWORDS

Business 4.0, Business Model.

1. Introduction:

The vast and fast developments in the global economy has completely altered the relationship between the customers and the suppliers. The advancement in the field of communication and computing technology and the easy availability of tech devices has led to the introduction of the latest business model, namely, Business 4.0.

Business are becoming more and more customer centric [1], with on demand supply and distribution facilities, by anticipating the customers need, collecting feedback from customers, giving the facility to test the item before purchasing, providing better customer service etc. Such developments require modification in the traditional business model.

These new conditions have tempted the businesses to not only address customer needs and demands, but to provide new and improved products and services to them [2]. Without a robust business model, developers, pioneers will fail to deliver value or profit from their innovation and technologies. A good business model illuminates the logic and delivers data, facts and other evidences that portray how the business is creating and delivering value for money to the customers. It defines the revenue, cost and profit models of the business [3].

Figure 1 illustrates the elements of a business model that needs to be determined or carved upon before establishing a business. The prime step for any business model is to select technologies and features that the management need to embed in the product or service. Next step is to determine the benefits the customer will get on using the product. Next step for the management is to identify the market segments that is to be target for the product sale. Further, the management needs to check and enlist all the available income streams. Next the management needs to design and implement mechanisms to capture value in the market and with the consumers.
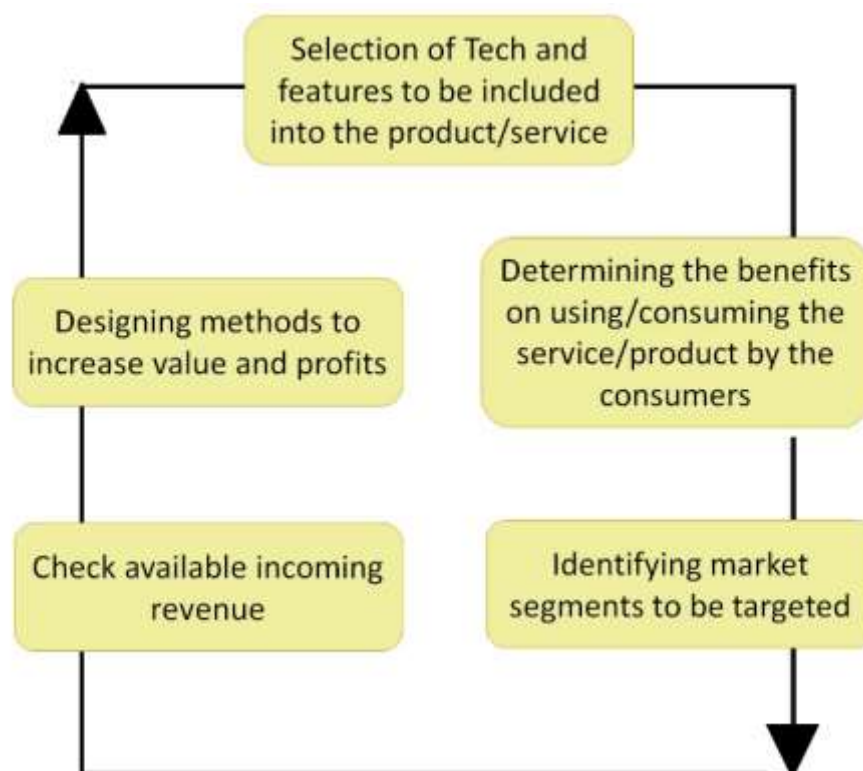
Figure 1: Different elements of a business model.

2. Traditional Business Model:

Business models illustrate how a business creates and delivers value to the customer and then transform all the payments into profits [4] [5]. It also embodies the organisational and financial architecture of the business [6]. It is a required feature of retail where the consumers have a choice, bears a transaction cost, and there is heterogeneity amid consumers and the producers, and there is a competition between different producers of service providers. Technological innovations are the most important factors for necessitating business models and its updating. It helps in bringing new discoveries to the market and in quenching the needs of the customers. New or updated business models can themselves imitate a new innovation. In this section we discuss a few traditional business models.

2.1 A Few Traditional Types of Business Models:

We will discuss a few standard business models now. Business owners can structure their business model to include some required or beneficial features of one or more models in their final business model to reap more benefits in their business.

2.1.1 Manufacturer: Manufacturer business model makes use of raw materials to create a product they wish to sell. The business model may involve the assembly of pre manufactured parts of a machine or a new product, such as automobile manufacturing. A business can directly sell the final products directly to the consumers. This is called business-to-consumers model. Another method can be deploying some other business to do the sales work. This is known as business-to-business model. Bulk manufacturing business sell their products to retailers, which further sell the products to the consumers [7].

2.1.2 Distributor: A distributor is a business model which purchases the product directly from the manufacturing company. The distributors then would resale the products directly to the end users or to a retailor. They can be thought of as a middle point between the manufacturer and the end users. This business model has the challenge of setting the price that will give profit to them and at the same time be lucrative to the users. They have to set effective promotion strategies for strong sales since the competition can be aggressive in some businesses [8].

2.1.3 Retailer: A retailer business model purchases the products from a distributor. It further sells the products directly to the end users. Grocery stores, clothing stores, departmental stores are a few examples of retailers. These models can deploy independent shops operated by single entity or nationwide chains. They can also deploy their business as an online business. Online retail model can be in a standalone online model or an online model selling from a physical location. Retailers also face competition from other retailers that offer similar products [9].

2.1.4 Franchise: A franchise business model can combine any of the above stated models. These models are setup to provide sales or production for a unique service or product. Franchisee is the sole selector of the business model who owns the franchise. The owner can reap a number of benefits from a franchise since most of the business process and rules are already set in place. At the same time this means that the model is less flexible [10].

2.2 Need for A Better Model:

With the widespread acceptance of technology, Internet of things, connected devices, cloud computing, automation and the vision of smart cities, smart healthcare, smart security systems and many other smart paradigms, it is now time to make the business industry smarter.

The demise of a popular but unsustainable business model now seems inevitable [11]. Significant transformations in the way the products and services are being produced is the next step in the business model. All of this will be possible with the help of above-mentioned technologies and digitization.

3. Business 4.0:

Business 4.0 is a concept of leadership framework, which will help end users and customers leverage digital technologies like computers and handheld devices to address their growth and transformation agendas. It will provide an integrated and holistic framework to help the customers address their issues and concerns and focus on their growth in an agile manner. Digital opportunity is a global phenomenon as these new technologies are becoming more and more acceptable on the business enterprise table [12].

3.1 Business Behaviour:

Business 4.0 is a term introduced and coined by TCS. It is a framework of how business work or behave that will optimize and make use of the digital technology to gain advantage in creating customer value. As per TCS, there are four different business behaviours of the leaders of the digital era that will help fabricate the digital technologies [12] [13].

3.1.1 Creating exponential value: Digital technologies have overwritten the traditional concepts of value creations and have presented new and bright opportunities of delivering value to the end users and customers. Technologies like Big Data, IoT and AI allows linking and cross-selling of the different products and services which makes it easy and assertive for businesses to look beyond increasing values and pre-defined revenue opportunities.

3.1.2 Driving mass personalization: Digital technologies are helping and enabling the businesses to deliver customization at a huge scale. Big data tools and data analytics allow a singular view of customer demands. It also allows nearly infinite scope of segmentations across a number of variables. AI and IoT solutions can help us drive user personalization at a large scale. Technologies like 3D printing can easily turn the production process upside down by starting with the most basic customer requirements.

3.1.3 Leveraging ecosystems: Digital technologies are variously expanding the boundaries of the industries and the landscape of the competition. Businesses across many industries are working together to deliver greater value and services to the customer. API, analytics and the various digital platforms have taken the group collaboration to a new level.

3.1.4 Embracing risk: Digital technologies have enabled the businesses to gain new levels of agility and flexibility in embracing the risks. Adaptation of digital means requires large-scale restructuring and transformations to the processes as well as the business model. Digital technologies have also created an environment that promises high returns on the risks taken. Maximization of digital technologies advantages for businesses, the management needs to think big and focus on the betterment of the customer, and ways of providing better and futuristic services and products.

3.2 Technology Pillars:

Technology pillars are the pillars on which the business 4.0 paradigm rests upon. Overall, four technologies have been identified on whom the paradigm can be handled upon [12].
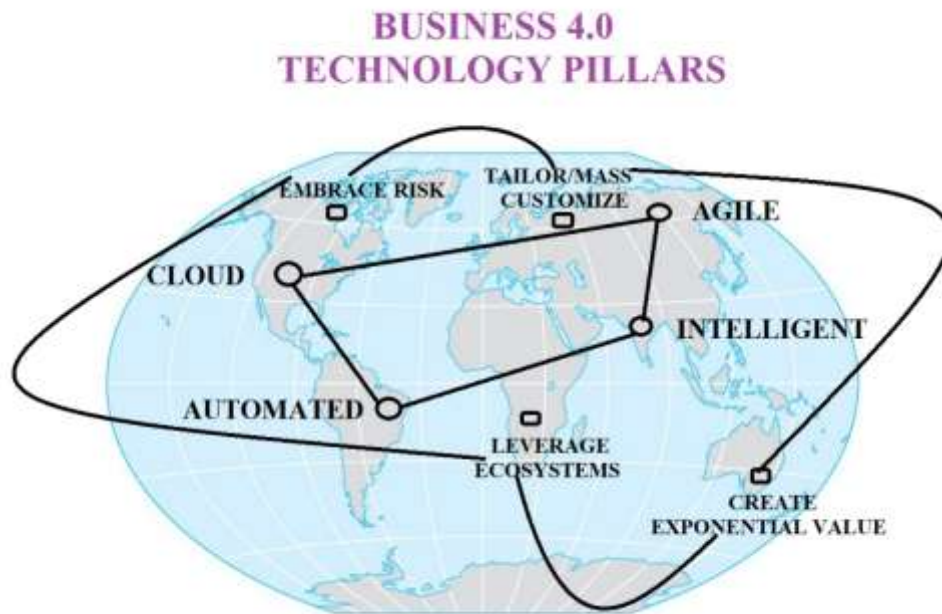
Figure 2: Business 4.0, technology pillars

3.2.1 Agile: Recently agile has completely transformed the alignment of business and Information Technology (IT). Simple meaning of the term agile means to move quickly. Agile is all about producing good quality, working software in quick time. Agile transformations help businesses to respond faster and with better results to the customers and competitors. It helps in becoming leaner and innovative. It also helps in taking calculated and well-informed risks which would help in gaining profits [14].

3.2.2 Automation: With the power of data analytics and AI, technology applications can monitor the production and delivery of the products and services. They can also control it. It will help in getting unmatched returns. **Machine First** approach gives the flexibility to humans to move away from everyday repetitive tasks by giving the machines the rights to make decisions without involvement of humans. In this way, humans can focus their attention on areas where human intelligence is required [15].

3.2.3 Intelligent: Techniques like data science, cognitive capabilities and Natural Language Processing (NLP) help the machines to understand and act autonomously and independently. This allows the machines to be automated for the tasks prescribed for them, saving time, energy, resources and at the same time increasing efficiency. All these autonomous solutions have taken the human capabilities to unforeseen levels [16].

3.2.4 Cloud: Cloud is the hub of processing and data storage. It provides shared resources and services which can be used over the internet, on demand and as per requirements. These services are flexible, scalable, and available 24X7. They allow computing capabilities to enterprises and businesses anytime, anywhere and support a large number of platforms [17].

3.3 The Age of Abundance:

Digital technology has completely reshaped the traditional concept of static and limited resource availability. Earlier humans used to work with limited resources and they had to bring out the best from those limited resources. But now, enterprises and businesses can harness resources in abundance. This is the key enabler of Business 4.0. The three basic building blocks of growth of business can be the following [12].

3.3.1 Talent: Digital technology has allowed enterprises and businesses access to abundant talent at all levels of expertise. Technologies such as cloud, automation and analytics has made it possible to gain unscaled resources, powered mobility to users, social and global access and platform economy. The availability of abundant resources has helped businesses come up with innovative and futuristic business models [18].

3.3.2 Capital: Innovation is at its prime in this world of digital technology, and developing it into commercial scale has become easier. Governments and big enterprises are eyeing and helping start-ups with brilliant minds and ideas. Technologies facilitate proofs of concepts and pilots at a smaller scale with limited capital requirements before increasing them [19].

3.3.3 Capabilities: With the availability of cloud services, the enterprises and businesses are no longer tied to limited in-house resources and capabilities. They are interested in developing partnerships with ecosystems big or large businesses, service providers, suppliers, their competitors and even start-ups. APIs allow them access to functional capabilities such as GPS, e-tailing and payment systems [20].

4 Business 4.0 At Work:

Business 4.0 is all about embracing technology. Industries and businesses are now often using combinations of behavioural changes to sell products or services. Let's look at some of the most prominent success factors of some international businesses in their success strategies [12].

4.1 Google's Exponential Value Growth:

Google when it was launched was a simple search engine. It took queries and displayed results. Its services were free for its users. Then after some time, many people from around the world started using google service on a daily basis which in turn gave google a huge userbase. First it started paid search for its users and then launched Google ad words to earn profits [21].

In a very short span of time, it became an integral hub for advertising and marketing. It started tracking its users' behaviour and used it to generate leads for other businesses. Further it leveraged user data for the GPS services. It also started providing free email service, and then introduced commercial use as well. Due to its data processing and analytic abilities, it was able to introduce a large number of products and services and grew to a $1 trillion company in no time [22].

4.2 Amazon:

When other businesses were still figuring how to use enormous data, Amazon was busy using advanced analytics to drive personalization on the masses. The traditional market segments at the time were gender, age and income. Whereas amazon made a segment of one, and started to break it up further. Automation, analytics and AI were use to male customizations on a large scale. If a user purchases a mobile phone, they will start getting offers to buy covers for the phone. It will display what the user searched the last time they visited the website to drive more sales. These advanced technologies allowed amazon to increase customer value and made it the worlds largest e-commerce marketplace and the most valuable public company [23].

4.3 Uber:

Uber is a business that provides transport service to its users but uber itself does not own a single vehicle. It operates by leveraging ecosystem of third-party vehicle owners. They used digital technology to change the way the users perform their day to day commutes. The app used to buy the services uses GPS to connect the user/rider with the vehicle drivers. It further adds a payment gateway to give quick and secure payment option. Dynamic pricing is also a functionality that benefits both riders and drives [24].

4.4 Netflix:

Netflix started as an online video store in 1998. In 2007 it launched its unique video streaming service. Finally, it launched its original programming business in 2011. They were able to launch these services because they used technology to read user preferences and likes and dislikes. In 2008, they completed moved their services to the cloud, which in turn provided them with the speed that the streaming services need and the scalability as it was expanding to different geographical regions. The switch to the cloud helped them gain an exponential rise in streaming hours. The moves were well timed and even better managed. Its subscriber base grew from a 25 million to 125 million in a few years [25].

5. Relation with Industry 4.0:

Industry 4.0 [26] is the main driver for Business 4.0. With the fourth industrial revolution the next business revolution was not far behind. Everyone nowadays is talking about sustainability, which can only be realised with efficient use of the available resources and services.

Industry 4.0 and Business 4.0 are the key enablers for human sustainability. According to Forbes report, "what has been available to us through each of the three preceding stages of our industrial revolution has been limited by what business could offer during each period with the tools at its disposal. That's now changing for the fourth time". So, we can say that the Industry 4.0 is providing business 4.0 with a new set of tools to work with. Businesses are creating value in ways never used before. The social systems are also adapting, evolving and reacting to the same for better or worse.

Technologies are allowing businesses to bridge the last mile and last minute of the connectivity chain. Value is now being driven by simplicity, convenience, connectivity, immediacy and many other experimental focused offerings. The society is adjusting, adapting and reacting and trying to advance what we have to work with and to live with it [27].

6. Steps to Achieve Sustainable Business Model:

Most businesses, earlier, did not possess any knowledge of sustainable development. From a deeper perspective, a sustainable business is the one which promises equal growth for business finances, environment and social factors. The path to achieving sustainability is not easy. In this section we list a few ways which will help businesses and enterprises to shape a more sustainable future for themselves and the community [28].

A. Building Businesses on Belief:

It is possible to change everything about a business baring the core belief. Developing a business on one's beliefs is nothing but generating value to the business. The modern business is totally dependent on the beliefs of the management. Belief should be consistent and one should work upon your beliefs and derive value.

B. Embracing the Changes:

When there are changes in the business environment either you act fast and adapt to the situation or don't change with the situation. If you access the situation correctly and perform the switch, you can be the biggest, boldest and on the right track. But if you access the situation wring and do not make the switch, then you may be the closest to extinction. One may have a brilliant idea, but a brilliant idea today may not be worth in a few months' time. So, businesses should find ways to take the ideas to the market quickly.

C. Developing Business Value Propositions:

Every business should have a crucial marketing tactics which acts as a catalyst for value, in reference to client needs and problems. So, if the business process doesn't get the schedule and planning right and it loses the touch with the value preposition, then our business can get completely failed. We should never lose sight of the fact that the purpose of the business is to push value for the customers. The focus should be on creating high business value and high capabilities which will help the user.

D. Growth and Comfort don't Co-Exist:

Today, things are changing very fast. Everyone today is trying to shift to the technological perspectives. If a business wants to grow, it needs to come out of its comfort zone and play in the open, since, competition in the market is at the highest. Banking industry is growing, everybody now a days is a retailer, every one is selling and manufacturing mobiles. Furthermore, businesses should have the main focus on delivering values to the users in innovative ways.

E. Excelling in a Particular Area:

It is an ecosystem of businesses today. It is not that one business is delivering products to all the users at every place. If you are not a part of the ecosystem, then your business is limiting itself. As the time passes on, the business will drift towards difficulty. One business can be a part of a number of ecosystems. And one's contribution in each ecosystem should be significant. One should always look at how things work to drive the incremental value.

F. Constant Reinvention:

For a business it is very important to constantly reinvent what you do and reimaging the way you do business but the core belief of the complete system should be retained. It is so because the employees, the clients and the partners need a strong belief to work with you and for you.

7. Conclusion:

It is difficult to consider that smartphones have been around us for over a decade and the Internet really became popular in the 20 years. AI has been in our scheme of things for decades but its only since the advent of smarter computers powered chips with faster processing that it has become a mainstream. Sensor technology has encouraged the Internet of Things. In business 4.0, automation, robotics, AI, cloud computing and other technologies are changing the way businesses are conducted. Now, man and machines are working together and closely than ever. The technology powered by machine learning will in the near future emulate the workings and patterns of the human brain. Smart robots will work alongside humans, not to replace them but to augment their capabilities. Smart technologies will make Business 4.0 more sustainable and efficient in the near future.

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