

# **FOUNDATION OF DIGITAL BUSINESS**

**Surojit Mookherjee**

**Vinod Gupta School of Management**

**Indian Institute of Technology Kharagpur**

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**Lecture 13**

## **Lecture 13: Digital Transformation Play Book**

Good morning. So, this is lecture 5 of this module, Building Digital Mastery and Transformation Roadmap. So, we will talk about the Digital Transformation Playbook. I will be referring to a book by David Rogers with the same name, Digital Transformation Playbook. If you can get it, you can read this book, which will have much more detail compared to what I will cover, but I will refer to the book very often, along with some pictures, figures, and topics, of course. So, I will begin with the domains of digital

transformation and then get into that playbook mode. Then, in this session and the next, we will try to cover some strategic planning tools that you can use for digital transformation. So, what is important? I will start with a small example or a case study of Encyclopedia Britannica, for example. You must have heard of this classic publication from Britain, Great Britain, which has been around for almost 250 years. All of us, at least in our childhood, used to have these bound volumes in the library. They were expensive, huge, thick volumes, large numbered sets, maybe 14 or 15 per set.

And, of course, it used to get republished every few years. Many people, many of us, had them in our houses as well. So, that was the only reference literature available in those days. I am talking about the 60s and 70s when I was a school student. It was famous all over the world—Encyclopedia Britannica.

But what happened once this or all these internet and all these computers came in? The first disruption was created by Microsoft when they gave a disk called Encarta. And they gave it free with Windows. If you bought a PC and bought Windows software operating system, you got Encarta free. So, Encarta was a digital version of an encyclopedia, not some other encyclopedia. So, now what happened with that? It became so easy now with

your DVD drive. You put the DVD in, you get any information you search for, handling becomes very easy, etcetera. The Britannica volumes are very thick and heavy.

So, getting them down from the shelf, putting them on the table, turning the pages—you had to be very careful because they were very expensive and the papers were thin. So, the handling was difficult, but here now suddenly there was a big change. So, you had a series, ran the series-type search, and got your response. So, and then came Wikipedia, which was no longer a CD—now it is an online platform where you get all the information you search for, and it is updated regularly. So, you did not have to keep buying books every 2, 3, 4 years, etcetera.

So, it literally forced Britannica to stop printing after 244 years in business—just like 244 years in the publishing business, printing and selling encyclopedias—and they had to stop. They understood that customers' behaviors were changing dramatically with the adoption of new technologies and transforming themselves. So, they now began experimenting with various delivery media, always maintaining a focus on their core mission: editorial quality—that is, the authenticity of the information—and educational service. So, Britannica was famous. There were many other encyclopedias as well, but people used to trust encyclopedias because

authenticity of the information which has been printed. Even for Wikipedia also we do trust, but sometimes you will find many contradictory statements and then continuously getting edited and there are many people can when you can volunteer to be editor etcetera. So, all that may not ensure the best possible quality. Because, I can also go and edit I can apply even editor, but on certain topics, but who certifies that I am an authority on that topic for example. So, I may be doing writing something which may not be tested or may not be 100 percent. But Britannica said we will maintain this standard authenticity of the information

and for educational services we are for that Britannica is for school mainly school and maybe or possibly college education. So, we will focus on that domain and they maintain profitability and revenue through online they went into the when online because they had to they do not have any choice and the online subscription model. So, you pay monthly rental etcetera and that was their revenue model. For the encyclopedia and other products related to classroom teaching. So, they sold this value to the students that if you pay some price rental like rental movie etcetera you can access our encyclopedia continuously

updated with the correct information and also some teaching aids you get many teaching aids.

So, for which will help you in your studies it will help both the students as well as the teachers because the teaching aids can be used by the teachers to teach. So, the challenges for the established firms, the digital born companies which are born like Wikipedia, Wikipedia is born as a digital company never had any print edition never. So, they started at online at a blog or a portal and they had their database or the knowledge center. So, Amazon, Google, Uber, Airbnb and Wikipedia etcetera they are known as born digital. So, they are digital native.

They show the path. So, they are the trendsetters. With digital technology, they held digital technology, they utilized digital technology and told others, 'Look, this is the way ahead. What you are doing is outdated.' So, you have to move forward; otherwise, you lose out. Digital technologies are creating new opportunities, business models, and revenue streams, making things cheaper, faster, more easily available, and more customer-centric and customer-friendly, for that matter.

So, they are all focused on the customers. They are addressing customer requirements much better than traditional companies, obviously, because of the ease of search. For example, compare the physical book Britannica to the CD version or the online version of Wikipedia. So, the digital adopters are those traditional companies like Britannica, Apple, and even Microsoft, who are adopting these digital technologies and changing themselves. There is a classic story of Kodak. Kodak was the biggest film maker, but then film—camera film—became outdated. So, it is now all digital.

Kodak went out of business. Therefore, they had to change and get into digital photography, digital processing, scanning, and all those areas they had to enter. But Kodak could not regain their number one position, which they had earlier. For them, the adapters are searching for data that can be monetized. So, once you have the data, they have to find out various monetizing techniques so that they can add to the revenue. Basically, they have to earn money. So, like Britannica, they started many educational packages and tools, not just the encyclopedia, which is the information source.

but then you can you add something else which you can monetize means which you can sell with the teachers can use students can use some educational products. So, they went to that we now will get into the educational service and then what can be servitized? So, what can be delivered as a service not as a product? So, anything which can be delivered

as a service I can have a regular revenue model because I can earn regularly on a monthly basis on a subscription model more my revenue. So, once I hooked on to that service I have to like if I am hooked on to watching movie I subscribe to Netflix or any other OTT problem.

So, any other OTT platforms I go on paying a monthly subscription, I can do Amazon prime, I can do Netflix, then hot star, you name it Disney, there are so many. Then regional languages in Bengali, English, Hindi. So, probably I have many I know many friends who are subscribing to 5 or 6 such OTT platforms, because whole day they are watching movies and serials. Similarly, with IRCTC we have I talked about IRCTC in the last class, government agencies, fintechs, all of them are trying to find out how they can monetize and servitize their business. So, IRCTC I was telling you about that this just not about railway ticket booking, they are one of the largest ticket booking sites possible in the world.

Now, they are venturing into tourism or providing you the last mile connectivity, you reach the station and then what you need a taxi. So, let me provide that as well. So, current state of digital technology adoption has become the most critical business evolution initiative of the digital age. So, you have to adopt to the various digital technology on average and enterprise organization has over 200 apps in its technology stack. Further complicating matters the 2 year application turnover rate is about 60 percent that is the problem with technology stack if you have too many is that to

Manage them. Number one, number two: they get outdated. That is another problem with this technology because technology keeps updating, upgrading, and new technology is coming in. So, you have to replace many of them when they get outdated. So, that is again another effort, cost, and trouble for the business. In a recent Harvard Business Review report, 56 percent of executives said that employees are expected to learn at least three new digital touchpoints every year. Every year, some new technology is coming in.

So, if it is coming in and the company has to use it, then the employees will have to learn. So, every year, it is part of the survey that every employee needs to learn probably one, two, or three digital touchpoints—something is happening or changing. Even the existing ones—the version changes, it gets upgraded, you will have new screens, new menu paths, etcetera—all of which you have to keep learning. Cloud and ERP are still among the most consistently high-performing technology categories in driving digital transformation, but the areas of rapid expansion are like customer experience. So, you are

going into the front end, the customer mode, the customer end—how they are seeing us, how they can interact. Am I opening up my platform, giving them access to my

my portal, my blog, my chatbots, through chatbots, etcetera, so that I can talk to them or they can talk to us. So, that is one of the areas which is the new area opening up because these are all backends—ERPs and clouds—they are at the backend, they are transaction processing systems, and these are the frontend where I can get my contact with my regular customer. Then, AI and machine learning are adding additional complexity to the technology stack. And complicating the employee experience. So, we are looking at it from different sides. If you have more technology, it is also a kind of problem because you have to learn,

Employees have to learn, then you have to master that, then you have to use it, and then there could be problems from that, etcetera. So, just adopting digital technology is something where you have to see both sides. So, pluses and minuses, the pros and cons, you have to weigh them. So, everything has a price. Like, there is a common saying that there is no such thing as a free lunch. So, it is not a free lunch. We have this technology, but you have to pay.

Businesses continue to add new solutions, new apps, hybrid work environments, and therefore, new processes, tasks, and procedures to their employees' daily workloads. So, I am just giving you the other perspective from the employee side, and these are the things which you have to do. But the thing is that we have to live with it because this is what it is. Because tech launches will keep coming, their development will continue, and we have to adopt and accept them. Now, if you go back to my digital transformation. We define this as a combination of five domains. So, keep this in mind; we will talk about it repeatedly. The domains are customers, competition, data, innovation, and value.

On the customers' side, we see—if you come to this bottom side here—how to harness the customer network. So, how do I get in touch or reach out? How do I reach the customer? How do we go beyond the products and build platforms? So, competition is one of the aspects. It is how to think beyond a product. It is not just a product; how to build a platform because once I build a platform, then I can reach out, or they can, in turn, reach to both inbound and outbound customers, stakeholders, vendors, etc. From data, convert data into value-creating assets. So, we have been talking about data—how you can monetize it, how you can servitize it. All those things are from data.

How can I get new insights for new ideas, for new business? Am I missing out on something, some customer pain points, for example? If I can get that from my data, I can address that. Innovation is about innovating with rapid experimentation. So, we will talk about this later—that you need to continuously experiment and take risks. And your experiments should be mostly short in duration; do not plan very long experiments because with this technology, as I told you, technology is changing so fast that if you take one year or two years, by the time you finish doing the experiment, the whole technology might have changed and

some new technology is coming, making your entire effort irrelevant. So, all your two years of time, effort, money goes for a loss, and value adapts your value proposition. So, adopt and adapt. So, adapt means that the value proposition should be part of your system, part of your DNA. You have adapted this value proposition—this is what I am going to give to my customers. The digital transformation playbook—now referring to the book—most of this is taken from David Rogers' book, *Digital Transformation Playbook*.

So, these are the domains: customer, competition, data, innovation, value. These are the strategic themes which I was talking about here and what are the key concepts for each of the themes? You will get them here. So, from a customer, harnessing a customer network talks about reinventing the marketing funnel. You know, the marketing funnel is a marketing tool which starts with how to make the customer aware of the thing and finally make them accept the product. That is—I will show you one view in the next slide. Now, you have to reinvent that from a digital business perspective.

The core behavior of customer networks. So, all of these things will need to be re-examined because of the digital way of doing things. For competition, we talk about this platform business model and the network effects. How the customers are all networked; we are nodes in a network, not just one end of the product. We will talk about that later and explain it. Big data and data-driven decision-making, innovation—there is something called a minimum viable prototype, and time to market is how soon you can bring a product to market. The product does not need to be complete, but with a minimum viable prototype. So, the product is half-ready but still usable for some aspects, though not all.

So, send it to the market, do not waste time, get feedback, then you can keep working on the product, improving and evolving the value proposition in a declining market. How can I move out from a current market that is either stagnant or declining? I can come up

with a disruptive idea and get into a new business line, steps to value proposition evolution. We want to evolve the value proposition. So, we have to show people how, with the help of digital technology, we are able to deliver certain value that was otherwise not possible or feasible.

So, continuing on, the first point was harnessing customer networks. Customers are no longer isolated individuals, as I said. Their potential and business need to harness the power because they are all interconnected through social media—again, thanks to technology. So, I am not alone; if I give feedback, it can be read by thousands of people. Depending on my followers, etc., in the network. I can post in a group; the group can share it, and it can grow—what we call viral.

So, one negative thing or a positive thing whatever I want to give about a product or service can be seen by thousands of people. So, that is the power of the that is why you have to harness that power the customer network. Co-development of new products engage customers with employees and developers to get the story and use them for testing for a benefit. So, I want to engage customers get their feedback. I open up my employees give them access my developers to the customers directly they do not have to necessarily go through the traditional route of using the marketing people the sales people talk to them directly get their ideas.

So, that you can invite them in your product development and for testing the classic example is co-pilot. When it was launched version 3.0, it was a beta product, they released it, it suddenly became popular and within a month millions registered and started playing, started doing this, they found it very interesting, start type something it gives you whatever write up etcetera. Now, for copilot that was actually they are getting it tested, because all of us are working for free in their servers. So, whatever we are doing. all of us it was getting logged into their servers. So, they could assess the outputs the question and the answer

whether it was doing right or wrong etcetera etcetera and evaluate the product continuously and then came within 6 months they launched a new version chat gpt 4.0. So, you can think how these companies are utilizing the customer which is us, we are not paying. So, we need to pay happily because we are free for testing their products. So, they are getting their products tested free of cost by us. Now I just quick discussion on the marketing funnel.

So, marketing funnel starts with awareness, consideration, preference, action, loyalty, advocacy. Action is when they buy, then loyalty when you repeat, etcetera, and advocacy when you start talking about the product to others, like etcetera. So, the digital tools which we are using here corresponding to awareness search and blogs, consideration is user reviews, preference social networks, action is you are getting giving discounts or purchase online in store for the purchase actual purchase, loyalty you are friending you are giving them some you know discounts if you buy more etcetera value based or whatever based and you are using your messaging through Facebook, Twitter or email.

And advocacy when you are you know the reviews like you are giving likes or your comments your positive comments is being used as a for the advocacy purpose about this product or service, the good side of it, the positive side. Now, the next domain was competition for customers. So, competition is about building platforms, not just products. To master competition in the digital age, businesses need to cope with

asymmetric challenges that are changing the rules of the game. The significance of platforms rather than products will need to be appreciated because of the platform facility provided by cloud service providers. Today, I may be a very small player, but my reach is global, and there is no limit. I do not have to invest a lot of money in advertising or buying things, opening offices, stores, etc. The cloud is just rental, not very expensive.

So, I just have space; I need more space. So, pay for the space, and then I can reach out to as many people or organizations as possible—there is no limit. So, what Nike did with the wearable fitness device, Apple did with iPhones—everybody has used this platform for their benefit, and we, of course, know what Amazon, Uber, and Airbnb have done. So, in the digital age, competitiveness is about platform business models. Firms are establishing new partnerships to leverage platforms for distribution—you create a platform where other players can join. For example, Apple brings in app developers on its iOS platform, gives them the facility to make apps on its platform for free,

and if the apps are purchased by customers, you get paid. So, I develop it free of cost and get paid if it sells. Direct and indirect network effects, co-petition between firms. Nowadays, many companies also work jointly for certain things—for example, Samsung supplies chips to Apple, or Toyota and Suzuki—these two companies are working together in India. You might know that they bring in some car models that share a common platform between Toyota and Suzuki. Their markets are separate, with different

brands, but the basic platform—the basic car—is similar. So, the development cost is shared by the two companies.

Or the Star Alliance—the airlines that group together. So, code-sharing is also competition. For example, Air India competes with Lufthansa, but they are code-shared. So, someone who wants to go to the US from here travels Air India to Frankfurt, then Frankfurt to the US using Lufthansa. So, both of them make money from the same passenger—me—but otherwise, they are competitors; they are competitive airlines. So, that is called co-petition and competitive value chains—the dynamics of disintermediation.

A disintermediation example is Amazon, which removes the middleman. So, directly, seller and buyer on a platform—there is no middleman. I do not have to go through a dealer, retailer, wholesaler, etcetera. And intermediation is where you bring together people, like introducing a digital platform between farmers and, say, wholesalers. So, like the ITC Choupal model, etcetera, or the eMundi model, etcetera. So, if somebody creates a digital eMundi.

So, the farmer and the buyer can come together. So, here, it is you are bringing in a middleware-type of thing—a technology which two sides can use to do the trade. In the domain of data and innovation, you turn data into assets—this we have talked about quite a lot. It begins with collaboration with data partners, your sales distributors, or customers. And then, analysis of the unstructured data is where the new thing is—thanks to AI and other techniques from social media platforms—which can yield various insights and feedback from the customers. So, with our natural language processing tools and other AI tools, now we can very easily analyze any unstructured data—be it text, picture, or video.

So, all the modes are available to us—structured, unstructured data, etcetera—for which to do our analysis and get our business insights. So, one can find out what the customer really needs or is looking for. So, a good data strategy can be created based on the sources and analytical capabilities of big data. The role of causality in data-driven decision-making—that because of this, the decision this if and why situation. And risks related to data security and privacy. So, whenever you are handling data, there is a lot of risk. One is data security because you are responsible when you are collecting data from your customer—you are responsible for the data.

So, if anything happens—somebody hacks or steals your data and it is misused—then you will also be held responsible for that. So, that is an area of concern. The other one is,

of course, data bias, which we will talk about later—more on that: the bias in the data, the quality of the data, the correctness of the data. The fourth domain is innovation through rapid experimentation. I have already talked about it. So, you have to take a risk and quickly innovate and come up with products

that may not be fully ready, but then you have to launch them in the market and get feedback so that you can continuously evolve. So, in the previous class, I also talked about—and showed a slide on—design thinking, where you come up with a prototype, launch it, and then, based on the feedback, you go through an iterative process to develop your final product or a better value-added product, because there is nothing called 'final' in digital technology—the product can also be continuously improved. So, you often explicitly launch an incomplete beta to get feedback. So, one example I gave you was ChatGPT—how they started with OpenAI ChatGPT 3.0, which was a very incomplete beta, but it attracted millions of users.

So, basically, you are getting millions of testers who are testing and evaluating a product free of cost. It was not truly free of cost, in the sense that they had to invest in servers because so many people were logging in, submitting queries, and receiving responses. So, you have to store that. So, you need storage space. So, they had to build huge server farms.

So, big servers and of course, they had to do it on your processors as well. So, for them it was investment in hardware, but no literally very few people cost, the testers are free. And the fifth one is adopting your domain called value where adopting a value proposition and to master value creation in the digital age, business must know how to continuously adapt their value proposition. So, they will have to think beyond your current business model. So, however, your current business model is very successful, but you have to continuously think because technology is coming in and bringing change, and that will always be there.

So, there will always be changes. So, you have to be alert; you cannot be comfortable. So, you might say, 'I have reached this stage, my business is doing well, it is selling well, I am making a profit.' So, I am happy. These things will not work anymore because technological change is coming very fast.

So, within 6 months or a year, you might suddenly see something that you are not able to cope with. Some challenger may come with new technology, new ideas, and customers may leave you. So, they are experiencing customer churn. And continuously scan for new

technologies to deliver the best value to the customer. So, you have to keep this in mind: you are giving the best value to your customer, and for that, you have to continuously scan for new technologies.

Examples: Encyclopedia Britannica. Transform them into an educational content provider, not just an encyclopedia; I am giving you educational content. So, for class 9 physics or class 6 chemistry, you are packaging certain information and selling it as a package. Unlike Kodak, which could not foresee the future of the print business in this domain. Walmart adopted an e-commerce model to become hybrid.

So did many others. Walmart was the biggest supermarket giant in the world, but they were threatened and challenged by a small company called Amazon. In those early days, Amazon was very small, but Walmart realized that if they ignored Amazon, they were at risk. So, they also started their e-commerce model. Thus, they became hybrid.

So, it is a multi-channel business with physical stores as well as digital stores. As a result, they could survive. Metropolitan Museum of Art, it is a museum famous museum in New York. They realize that people are not coming, so to attract visitors they went digital, they evolved adopted many digital tools, so that they can attract specially young people to come to the museum, because if you do not have a foot fall to the museum, then the museum will They needed revenue to maintain operations.

So, the entry ticket, which we pay 10 dollars or whatever, is what is required, and if the footfall falls, obviously, the revenue stream will fall. And Disney, as I have touched upon earlier, has evolved from a theme park to a digital media giant. A theme park where you physically go and enjoy the rides, etc. Now, they are better known as a digital media giant—Disney Plus. So, to correctly adapt the value proposition, organizations need to analyze their existing value proposition.

And then possible paths out of a declining market position. So, you have to identify this declining market position and find a possible path to get out of it. Identify the emerging threats and opportunities and devise an effective alternate solution for survival and growth. In most cases, it will be the 'go digital' mantra. So, today, any business that is in trouble has to find a digital solution.

Even if it is a new business, a new idea, whatever—you have a lot of data, a lot of history, and you want to capitalize on that. Then, you have to find a solution, which in most cases— Probably, in today's world, will be 'go digital.' So, there are nine strategic

planning tools for digital transformation. I will cover some of them in my next class. So, there are six categories here: customer, competition, data, innovation, value, and disruption. Again, this is from the book by David Rogers.

So, as per his book, he has suggested some planning tools you can use. I will explain some of them—not all—the rest are in the book, which you can use as part of your transformation strategy. Your business needs to do digital transformation in a particular structured way, and some of these tools will help you do that from different angles—from the customer angle, from the competition angle, from data innovation value and disruption. The customer network paradigm—I was talking about the customer as a network model. So, here is the traditional mass-market model: you produce something, sell it, people buy it, and that's the end. But here, you do something, sell something, and the customers are all interconnected through various social media platforms.

So, they are talking—customers are talking with each other on Twitter, Facebook, Google, YouTube, etc., various forums where customers can reach out, interact, and give feedback. So, you have to think of the customer now as a network community, not like this: you push, a customer buys, and that's the end of it. No, you push something, and it's not the end of it—then the customers talk, and there are others to listen. The brand today is no longer what an organization creates, defines, and projects; it is something that the customer shapes. So, it will give you a shape.

So, whatever you want may not happen because the customer may think otherwise, and they will talk amongst themselves, discuss, and you will see that things are not going as you planned. They are not satisfied with just a transactional relationship but expect and invite customer participation. PepsiCo, for example, a brand-focused company, gets some of the best communication through short customer videos. Lay's brand of potato chips has never even let customers—they allow customers to reinvent the product. They can give suggestions so that they can change the product, plus all the videos come from the customers and they use them for their advertising. TripAdvisor, the reviews for travelers, invites reviews which they use for recommending various hotels.

All the hotels are on TripAdvisor. They are paying money to TripAdvisor because TripAdvisor is collecting all the reviews from various travelers—business travelers, holiday travelers, etcetera. So, with that, I will stop here and continue on this in my next session with some of the strategic planning tools. I hope you will enjoy that and find it useful. You can also try it out in your work area. Thank you very much.