

FOUNDATION OF DIGITAL BUSINESS

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Week 02

Lecture 09

Lecture 09 : Overview of Digital Transformation

Good morning. The next module is building digital mastery and a transformation roadmap. We will start with an overview of digital transformation, then move on to how we develop digital mastery, and then utilize that to create our transformation roadmap. We will cover digital transformation, discuss factors for the failure or success of digital transformation, and then outline the roadmap for digital transformation. So, failure to transform is fatal. When a business wants to undergo transformation,

it invests a lot of resources—money, time, people—and makes many changes, including significant change management efforts where people must adapt. This is one of the major barriers to transformation, and many transformations fail. But these transformations will have a deep impact on businesses in every industry due to the onslaught of new technologies. I mean, you cannot really resist. The problem with technology is that it is very difficult to resist because when you see the advantages it offers. You immediately think of adopting it for business—we will stick to business purposes.

Then, COVID-19 brought a major shift, changing the way we work—people could not go to the office, etc. We had to innovate technologically to ensure work could continue. So, we had to innovate technologically to ensure work could continue. For example, the education system: all classes were closed, so how do we teach? You had to use technologies like online platforms such as Google Meet and You had to use technologies like online platforms such as Google Meet, etc. Zoom platform, so that we could continue teaching and students could stay home and continue their education.

You might argue that it is not very good, but there was no other choice. It really forced us to innovate and bring in technology so that our work can go undisturbed to the extent possible. Online streaming, telemedicine, online learning, e-commerce, remote work—all

of them became the buzzwords, and today they are very much a part of our lives. We have accepted them, At the same time, I can probably do more work, more productive work. All of these things are actually changing the way we work. The future of work is also going through a transformation.

We are also thinking about how we can further change because this has given us an idea that with the help of technology, we can change the way we work, the way we interact with others, and change almost all our behavioral patterns—the way we learn, or how we educate ourselves. All of these things are undergoing strong review again, thanks to technology and digital technology. These shifts are not slowing down; they are continuing and accelerating. Digital transformation is no longer a question of if, but of how fast. We have accepted digital transformation, digital technology, and the way it is impacting our lifestyle in general.

Digital transformation, which we abbreviate as DX (a commonly used term), is on the agenda for every board in every industry. We cannot afford to keep getting it wrong. It is from the book I have referred to here: David L. Rogers' Digital Transformation Playbook, published by Columbia University. You can read that book So, this is from the book I have referred to here: David L. Rogers' Digital Transformation Playbook, published by Columbia University. You can read that book—it's a very excellent book. What he says is that we cannot afford to get it wrong because we have to succeed, and we cannot avoid it either. Since we have to use it, we might as well succeed. nobody likes failure. How do you define digital transformation? Transforming—an established business. In a world of constant digital change.

So, nobody likes failure. So, how do you define digital transformation? Transforming—and this is by David Rogers—an established business. In a world of constant digital change. It is basically one sentence, but I have broken it into three parts. The first part is transforming. It is about business, not just technology. The first part is transforming. So, it is about business, not just technology. We are not talking about technology and we are talking about the use of technology in business.

The focus—or the main point—is to transform, to change a business using digital technology. it should always be framed around your business, your employees, your customers, and not around the list of technologies to adopt. Your focus should not be on the technology. I will repeat this often, and it should be in your mind. Technology is not

what we are teaching here. It is not what I am trying to teach you—But how to use technology, what to do, etc. So, technology is not what we are teaching here.

It is not what I am trying to teach you—what is how to use technology, what to do, etc. The point is that when you are adopting a digital technology—going through a transformation—the focus is on the business. The focus is on the employees and the focus is on the customers. The second part was an established business, transforming an established business. An existing business may be doing very well, very profitable, running, etc. So, an existing business may be doing very well, very profitable, running, etc. The biggest enemy to transformation is inertia, the organization's resistance to change.

Here, because I have a successful company—let us say I am Tata Steel, or I am Tata Motors, or whatever, I am L&T Cements, Ambuja Cements—big, big names, big companies, very successful companies. But are they going through this? Have they started this transformation journey? If not, then they are at risk. Have they started this transformation journey? If no, they are at risk. Because this inertia, is the risk they have to overcome—they need to go for it, because if they are successful today, it does not mean they will remain successful five years down the line. We have seen how technology is changing the world—like Airbnb, how it has impacted the hotel industry, how Uber has completely impacted the taxi service.

Today, in the city of Calcutta, you do not have those old-age taxis where you just show your hand on the road, and he stops, and you get into it and travel. You do not get a taxi outside like that. You will be there, but he will ask you, 'Can you book it through an app?' Otherwise, he will not be able to take you because he does not have a meter; he cannot charge. The third part is to thrive in a world of constant digital change. Digital transformation—in short, I am referring to it as DX—is a continuous process, an ongoing acceleration of change driven by successive waves. Technology after technology after technology will keep coming. Now, you cannot stop. Now, you cannot stop.

Today we are talking digital, tomorrow we will be talking or have already started talking about AI, then generative AI, and so on. From AI will come robotics, and it will revolutionize the way people work, live, talk, etc. It will continue to reinvent customer behavior, business models, and economic systems well into the future. How does it get complex? We have to start by assuming or accepting that digital transformation is not

easy. So, it requires a lot of effort, a lot of pain, a lot of focus, a lot of passion, a lot of dedication, and so on. It is a kind of balancing act.

It is not just a simple effort to digitize. As if I have money, spend it, put in some digital equipment, and that will do the job of transformation. No, it will not do the job of transformation. You have to upgrade the technology, cut costs, improve customer experience of your current offerings, etc. It is not just the technology and cost-cutting; the main focus is whether I am improving the customer experience. Is my customer benefiting? To stay relevant, survive, and grow in the digital economy, every business must be ready to digitize its core. And grow beyond. Initially, you must have digital technology—let us accept that, no doubt about it. You must have ERP, other enterprise software, CRM software, PLM, supply chain management, whatever.

Then you have to grow beyond that so that you can maximize your cash flow, invest for the future, and pursue both incremental innovations and radical ones. With that in place, you have to keep coming up with incremental or radical innovations. But you cannot rebuild your current business and build your next business with the same people, processes, and organizational structure. This is very important to understand. If I have the same set of people, follow the same process, and the same organizational structure, will I be able to achieve what I am trying to do? When we implement ERP, we tell our customers that if you do not change your processes as per the ERP's recommendations, all you are doing is putting old wine in a new, expensive bottle.

Because that ERP software is not cheap; you have to pay a lot of money for it. You buy very expensive software. Then, whatever changes in processes it recommends, you want to stick to your traditional ways because you or your employees are very comfortable with how they have been doing things. You say, 'Fine, ERP is fine, but the process steps I will not change.' They will do sales transactions or purchase transactions the same way they have been doing for the last 40 years. Then, you are completely wrong. Because then you are literally putting your old wine in a new bottle, which is an expensive one. You bought a very expensive new bottle and are putting the same old wine in it. You bought a very expensive new bottle and are putting the same old wine in it.

The bigger the organization, the more employees you have, or the more divisions you have, the more challenging and difficult it becomes to bring in a transformation. It is pretty obvious. I mean, if you want to transform a small industry with fewer people and one location, it is relatively easy. But if you have multiple locations, multiple divisions,

multiple branches, the more you spread out, the more complex it becomes. The complexity of managing the organization compounds dramatically. The top barriers to transformation—digital transformation, or DX (please remember, DX represents digital transformation).

No shared vision—that's one of the barriers. If you have your shared—like, the CEO has a vision, but it has to be shared with. If you have your shared—like, the CEO has a vision, but it has to be shared with, you know, all employees, all the branches, all the departments. The vision has to be shared. If you do not share it—just stick to yourself, saying, 'This is my vision; all of you, execute that'—it will not happen. The vision has to be shared, understood, and appreciated by all key people—definitely the key people, all the key people. Finally, of course, by all employees.

This may arise when companies focus only on digitizing their past business and not looking beyond it. I am just somehow enabling my digital tools, bringing them in, but I am not focusing on how to grow the business. Rather than focusing on the business problems, digital transformation is defined by technology. These are the barriers. If you do it, then you are doing the wrong thing—you are preventing the transformation. All of these technologies you can bring in, you can use them, but you are not focusing on the business, and they are easily hijacked by the latest shiny new things without a growth focus,

Focusing only on cutting costs and optimizing the current business. The transformation you have to have think on cutting cost and optimizing the current business. I have implemented say cloud technology and all my employees are working on cloud. I am very happy. But is it giving the result. Did I focus on what they will do, how will they bring in the transformation, how will it improve my cause, improve my process and improve my current business. If not then the transformation will not work. Also another major thing is that all these transformations are often run by the CIO's organization, the technical people and the rest of the organization continues its work unchanged.

This is another drawback where technology change or transformation is driven by technological people. The correct answer is they should be driven by the business people because ,you are using your technology to solve a business problem or to help your business, to grow your business, to meet your customers demand etc. or cutting cost. These are all business dimensions. You have the CIOs organization, the technical group, the IT department or whatever you name They will help you with the technology, getting

the right technology, implementing the technology, maybe giving the training on how to use the technology, how to use that software,

They do not know or they will not be able to appreciate what this technology is being used for. That can be done only by the business people. That can be done only by the business people. All such transformations whatever it is, let it be digital, let it be software, let it be IT, it has to be led and managed by business people. This is very important and please keep this in mind. All this transformation journey is to be driven by business people. The other barriers are no focus on experimentation, so you are not trying out new things. You have the technology, but you do not want to take a risk of experimenting for whatever reasons of fear.

But otherwise you have to use Agile software teams and Design Thinking iterative methods are often mistakenly put into planning management model. These are the tools which you need to use for your experiments. Agile software, agile project management and Design Thinking methods, iterative methods etc. I will talk later, and also how to put to your regular use. Do not make them very conventional management top heavy type of team and ask them to do. This will not work in today's terms. It has to be an iterative process using design thinking and agile methodology. I am sure many of you might have heard about this term agile methodology. You have to do things very quickly. Nobody will give you months or years of time to come up with something new.

You have to do it in weeks or months because technology is moving very fast. Your competitors are also not waiting and watching, they are also moving and your customers are expecting, things to happen fast. You come up with a new mobile as today, new models come every month. Samsung or others companies are launching a new model frequently. Apple launches a new model every 6 months or so. Now flexibility in governance. Traditional silos, reporting lines, this conventional hierarchical structure again will not be successful for digital transformation. You will have to change your organizational structure.

If you have functional silos for example, I mean you have teams sitting across walls or boundary walls, then again that is again a barrier because you need to have a cross flow of information. Team has to be collaborative working cross functional. It is not that finance is separate, manufacturing separate, purchase separate, marketing separate. The teams are normally process teams where you have members from each of the functional areas because every process has to be cross functional. You just do not have a finance

process. It will be Order-to-cash. When I have a sales order, marketing person sells but the process does not end till I get the cash from the customer. Ordered is received, manufactured, quality tested and delivered. The customer accepts that and then releases the payment then only the process cycle gets completed.

You have to think from a process angle and involve all business functions in any team. If , no change in capabilities then legacy talent remains undeveloped with little investment in digital sales. You have to make them digital literate or AI literate. Think AI think digital. The way you want to work, when any new problem comes first thing we should think as to how to solve it using digital technology or AI . That is how your thinking needs to change. Today you have to make everything digital-first, AI-first.

So, today you have to make everything digital-first, AI-first. The first opportunity I should give is to some digital technology or AI technology to provide me a solution for the problem. If you take examples like Walt Disney, a famous entertainment company. Those Walt Disney parks where children go and enjoy all those games, etc.—traditional things. But then they realized, Disney Plus, combined with ESPN and Hulu, etc, and they started a media company, Disney Plus. The company's total number of streaming subscriptions had surpassed those of Netflix at 1.0. The company's total number of streaming subscriptions had surpassed those of Netflix .

So, Disney is now no longer known as a theme park company; it is also a media company launching Disney Plus through all their entertainment software products. It has brought in a change there. The way they function—not only function, the branding, the way business is now looked at—it is not a theme park only. It also has a movie channel, a digital channel, or media presence—a big presence in the media—and they are competing with giants like Netflix. Mastercard—we all know it for our debit and credit cards. Mastercard is a fintech company processing all our payment transactions to commercial organizations and they are the middleman. They provide credit payments to business people or shopkeepers, and they, in turn, get the money from us after some time. There is a credit period, and that is their whole business.

The credit card processing company is also now one of the biggest in digital since it has got all these transaction data, huge volume, millions of transactions happening daily at Mastercard or Visa. What they are doing—is leveraging this tremendous data and global network presence—they have built a business in digital commerce. It runs one of the top accelerators for fintech startups. If the fintech startups need transaction data, they will go

to MasterCard and they will buy the data. If the fintech startups they need transaction data, they will go to MasterCard, and they will buy the data. The innovation labs are building and scaling new business models around cyber security, digital identity, analytics because in any credit card transaction cyber security is a very big thing.

How you establish your digital identity and the back end analytics is very much required for cyber security, while selling their digital business. They are now considered as cyber security experts. If I need a cyber security solution, I am a fintech business, I will go to Mastercard on how to establish a digital identity of a buyer. Somebody wants a loan from my bank, and if I am a bank, I will go to Mastercard for a software which can give me proper digital identity of the person who needs a loan. So, I want to do a check to ensure that this person will repay my loan. Those sort of applications are being developed by MasterCard because of their huge database of the daily transactions which is happening. They know who defaults credit card payment.

They have now profiled their millions of customers and the bank can check this profile if it is there in the list. What is his credit history. This gives lot of information to the bankers. Then what is his credit history. This gives lot of information to the bankers. The steps, digital transformation roadmaps if I want to summarize. First one is vision. We talked about defining a shared vision. The concepts behind vision is the future landscape. We talked about defining a shared vision. The concepts behind vision is the future landscape. The right to win, the north star impact that is bringing some very innovative stuff that is called the north star impact and the business theory.

These will be your basic concept or constituents behind your vision and this is what you need to share. I am saying this from the CEO perspective and he will need to share this with your team. Pick the problems that matter most. Identify the problem opportunity statement, the problem opportunity matrix and the venture backlog. Problem opportunity statement, the problem opportunity matrix and the venture backlog. What you need to do is you have to identify for your transformation journey which are the problems which matter most. You have to give them a priority because you cannot start with all the problems together because you do not have enough resources. Your daily business has to continue. When you want the transformation, you will need some extra bandwidth.

You want your team to spend some extra time or bandwidth for this new venture . Select and give them priority of which problems they should start working on. Validate new ventures, this is the experimentation part. You have stages of validation, the Rogers

growth navigator these details are there in the book which cannot be covered here in this short time. Then illustrative versus functional minimum value products. MVP is a minimum value product where if you launch a new product we say you start with something which is not yet fully ready because it takes long time to develop a fully matured product.

So, why don't you start with something which is a minimum valuable product. It can do some work may not be whatever it is designed to do Out of 20 tasks probably it can do 10, so why not we launch it and get the feedback. Customers also like to see things working before they can react or realize or find out whether it is good, bad, they are happy, not happy, whether it is useful, so they can give good feedback. This is the experimentation stage, validate new ventures, but do not wait, you have to take a risk.

The message is that you have to take a risk. And you have to otherwise you will lose out because somebody else will do it faster than you. If you say, go on testing, let my product be very good, fail proof, I want to ensure that it does not fail. You might take very long time, maybe one year or two years to come up with the product. But the point today is, in today's world of digital nobody will give you that time, nobody has got the patience, nobody wants to wait because if you take two years time, by that time many of your competitors will come up with many other products. And then when your product is ready, similar products have flooded the market. So the first movers advantage is gone. Manage growth at scale, this is governance.

Manage growth at scale, so you have to form your team and boards, iterative funding process, three paths to growth and then corporate innovation stack. Scale means if I start something small, how fast can I grow to a sufficiently large number or business volume, because small things do not really matter much. Just to start, you need a small way, start in a small way, but then you need to scale up very fast. So that is the buzzword, you need to scale up very fast because again once you have started small, then somebody else have noticed it and so they will also copy it and if they can scale up faster than you, then you will lose out. Although you innovated, you got the idea first, but then somebody overtook you and went faster.

Happens with phones for example, you bring out a phone with a new feature, and then somebody else picks up that starts from that add some more features and then beats you in the race. Classic examples are Uber and Airbnb- how they scaled up very fast by that I mean in no time people were aware of that there is something very new and we should

also try out. UPI for example, it scaled very fast. Because people saw the advantage initially the product may not have been very smooth there may be hiccups you know network connection etc. But they had launched and people started using it. Once you start using it you see the benefit of UPI and even if you have some problems you can live with that problem because the benefit is much more than the problem. So we weigh as customers we weigh out what benefit I am getting vis-a-vis what is my you know some sort of disturbance, okay maybe momentary lapse, oh it is buffering, it is not connecting, net banking, problem, bandwidth problem, there can be so many other problems which is the end result is okay. Fine I am not getting irritated I am not very happy. But am I giving up? No, if the product is good. know if I am getting very good advantage like UPA I do not have to carry cash or a change for that matter. I pay the cost of that thing is 7 rupees and I have got a 50 rupees. I know that the shopkeeper does not have a change. So, what do I do? Plenty of situation where you could not buy it and had to go away without buying it because either you or the shopkeeper didnot have change, but UPI solved that problem. If you do not have a change, you pay by UPI. This is the advantage of a technology which can help it to grow at scale.

You must keep that in mind that can I grow at scale. If not then this technology probably will not succeed. So, you must put it as a part of your governance. Capabilities grow tech, talent and culture. Tech and talent map, modular architecture, culture process map. These are all big things, but main thing is talent. Any development, any new technology, any transformation first starts with the people. One is the technology, the other is the people. I need technically enabled skilled persons.

One is to of course you hire new talent which you have to do something like you need a data analyst. The other option is you retrain your team, your people because the people are already there so can I retrain them. That should be the first option because what do I do otherwise with new technology they will become obsolete. We cannot as yet think of you know just removing people and getting new people because they are my trusted people they have been working for this company for a long time. So, I trust them. They are dedicated to the organization and I need them. The best solution is can I retrain them.

Think of first thing for reskilling. We say is make everybody AI literate for example. Already AI is coming in such a big way that you should try to make everybody AI literate that starts from the CEO down to the lowest level. There are various levels, of course everybody will not be exposed to the same set of things or educational things, but

everybody should know bit of AI, a bit of the digital way of working, the digital culture. Your whole thing should be designed such that the knowledge of AI and knowledge of digital culture, the digital journey, the digital transformation percolates down. It starts with the vision which starts the top. Along with the vision the education part also should flow down so that people are digital literate.

The roadmap is to have a vision, define a shared vision, have the priorities and then do experimentation, the governance and capabilities. I have discussed all of this in my previous slide. The details, some of the details are documented here for your reference later on. The capabilities, one of the crucial step of the roadmap as talent and technology are the two most essential things which will achieve the vision. Ultimately it is the people who will do it. You have your technology, but unless there is people to manage the technology that technology will not be very useful to you. Focus on talent part.

Do not ignore talent. It is often ignored and that is a problem also there is scarcity of the right type. That is problem number 2. One is you are ignoring, second is there might be actual real shortage that particular talent is not available and finally you will have to appreciate the talent will also influence the culture that is being targeted. Because education and training is an integral part of your organization culture. The culture is growth oriented, it is education oriented, it is knowledge oriented. We become what we call overall it is a knowledge industry. Not only our products are for the knowledge economy, but our employees are also encouraging cognitive learning.

We encourage our employees to keep learning new things so that they can adopt and adapt new technology. Some symptoms of success of the roadmap is of course, the vision priorities. Then you do experimentation, governance capabilities sorry this I have already covered most of it, but here you give details of what are the some of the symptoms. For experimentation, innovation is focused on testing many ideas to learn which are best. For governance for example, resource allocation happens quickly through iterative funding. These are some of the indicators, which will indicate that this is going on a right path. What are the indicators', capabilities? Modular IT systems integrate across the organization and with outside partners.

Once you have established this, it is a symptom of success. If you have done it, yes, then you are on the right path. Data provides a single source of truth to managers across the company. The importance of data—we will talk about data later when we discuss AI—but this is where it indicates that, yes, once we have established that the data is quality

data and a single point of truth, we are not duplicating data so that we can avoid errors. That is an indicator, a symptom of success in this capability area and IT governance provides oversight. While keeping innovation in the hands of the business.

Another symptom of success is that the governance is with the business, although your technical team supports it to ensure technology is used properly. It should be run and managed by the business. We will continue further on this same topic in the next class. Thank you very much.