

Technologies that could dump current businesses into Jurassic Park

The pace at which technology is changing today makes it imperative for companies to 'be ready' not just for tomorrow but for the day after (which they may never see, if they don't reinvent themselves today). In fact, it is not just about individual companies, but entire sectors of industry may get wiped out if the competing companies in that sector do not embrace the change. Today, the question is not about how an organization 'adapts' to emerging technology, it is about 'adopting' technology and changing existing business models. I am not talking about the introduction of new products here, the core offerings of an industry do not change, since the core offerings are dependent on core needs of consumers, e.g. an insurance company needs to offer a safety net against calamity, that is the core offering based on the core need of a human being (of hedging against uncertainty). My emphasis, in this article is on doing the same business, providing the same 'core offering', albeit, in a completely different manner, which will force existing companies to change the way they operate, change the way they are organized. Otherwise they run the risk of being dumped into the 'Jurassic Park' of Business.

In this series, I have discussed a few emerging technologies and their impact on certain industry sectors.

1. Internet of Things- Every object, will soon have a unique IP address and will have sensors that will enable it to communicate with other similarly enabled objects and we will have an ocean of interconnectivity generating trillions of petabytes (10^{15}) or exabytes (10^{18}) of data. This kind of data, if creatively used can lead to a number of consumer-friendly business models. Further, under this topic, two industries have been explored, viz. healthcare and automobile
 - a. Compliance-based pricing in Healthcare
 - b. Telematics converting product businesses into hybrid (product cum service) businesses
2. Geo-location: App-driven taxis and analogies to e-Retail
3. Femto Photography & the 'Art Industry'
4. 3D printing & the cloud
5. 'Reverse gridding' & the creation of tiny-scale Energy Entrepreneurs
6. Simple 'Data Analytics' to link 'Green' behavior with one's IT return

Let us look at each concept in detail. We will begin with what everybody has been talking about for the last couple of years, 'The Internet of Things'.

1. Internet of Things

- a. Compliance-based pricing in the Insurance Industry

Current Scenario

Today, insurance companies charge a premium that is based on the age and health-risk profile of an individual.

Imagine a scenario where two individuals A & B, of the same age with a similar health-risk profile, buy the same insurance plan, both, A & B are mildly diabetic and have a similar blood sugar reading (at the time of the commencement of a Life Insurance Policy) then, both are charged the same premium. However, individual A complies better with the treatment drugs and recommended dietary restrictions, individual B does not comply as well. Consequently, A's blood sugar levels are much more in control than B's. Obviously, B is a higher risk for the insurance company, but under the current insurance plan, both will keep paying the same insurance premium.

Proposed Scenario in light of the Internet of Things

Now, imagine, if the insurance company had a system of recording both, A's and B's Blood sugar, on a regular basis and capture that information on the cloud, they would know the compliance levels of both, A & B, and also the increased risk levels of individual B. In such a case, ideally, individual B should be charged a higher premium than what A pays. Today, we have numerous non-invasive devices for checking these health parameters. I propose a solution, where such devices could be synched with mobile phones and regular readings of the individual's different health parameters such as Blood sugar level etc. could be uploaded on a cloud server owned by the insurance company. The insurance company could keep a track of the compliance and risk levels of its customers and introduce variable premium insurance plans (charging B more than it does A, in the above scenario).

It's a Win-Win situation:

If such a system existed, not only would the risk come down for the insurance company, but it would also incentivize customers to maintain a healthy lifestyle complying with drugs, dietary restrictions and exercise. It would ensure customer delight and in effect increase the insurance company's market share. Win-Win situations in business don't get better than this 😊 😊 😊

b. Internet of things and Telematics: Converting product businesses into hybrid (product cum service) businesses

With internet connectivity becoming ubiquitous, every object will soon become electronically connected with everything around, i.e. every object will become identifiable by a unique IP address, e.g. your mobile phone can tell you the temperature your refrigerator is operating at OR you can control your microwave or your doorbell through your mobile phone.....the possibilities are endless. The phone is just an example that I have cited, the device could well be your laptop, your watch or your tab or anything else that is internet-enabled.

Some more examples:

1. With the IOT, you would get to know how much fuel is available in your car's fuel tank, sitting at home, on any internet-enabled device.

2. You would also get an alert from your car tyre manufacturer that the tyres of your car need a retread or a replacement. How? The tyres would have embedded sensors which would be connected to the cloud and would constantly feed information about the condition of your tyres, to the tyre manufacturer.

So, basically every object that we use will be connected to the worldwide web and all performance data will be traceable and available for appropriate action by the manufacturer.

How would this happen? It's quite simple. Every object will be embedded with sensors that are internet enabled and can transmit data to each other and to the internet cloud, where it can all be captured, diced & sliced for interpretation and appropriate action.

How would IOT impact Business?

All business models would gradually shift to some variations of the 'Pay per Use' model.

How? Companies would soon begin selling products that will be embedded with internet-enabled sensors and hence capable of transmitting performance data back to the company. Companies have already begun to use this data to send alerts to consumers about maintenance of such products (i.e. XYZ component needs servicing, ABC component needs replacement etc.)

What does the future hold? Since companies would also know the extent to which and under what conditions (tough or normal), the product is being used, they would begin to charge consumers on the basis of how much and at what level of wear and tear, the product is being used. E.g. if I am driving my car, the manufacturer would know how many kilometers on what kind of terrain I am driving. If I am driving on an expressway, I would be charged, say, Rs. 8 per kilometer. If I am driving on a rough country road, I would be charged, say, Rs. 10 per kilometer. The latter being higher because I would be subjecting the car to a greater wear and tear. With such data available, the manufacturer would be able to sell me a car at a small down payment, which is a fraction of the entire selling price that I have to shell out today and a recurring cost to be paid to the manufacturer as and how I use the car in future.

How would the payment loop be completed?

We already have payment mechanisms like the Google wallet & Apple Pay gaining popularity. So the usage charges would be debited from your e-wallet as and when and how you use the product.

Implications

1. **The consumer** gets to own a product at a fraction of the cost, plus she/he gets a much higher level of service through regular maintenance alerts etc.
2. **The seller** gets more consumers hooked onto their products for a longer period of time (almost a lifetime with a series of products), paying recurring installments spread over the lifetime of the product. After all, marketing intellectuals, these days, talk eloquently about Customer Lifetime Value (CLV).

Hence, it would be a win-win situation for both, the consumer and the seller.