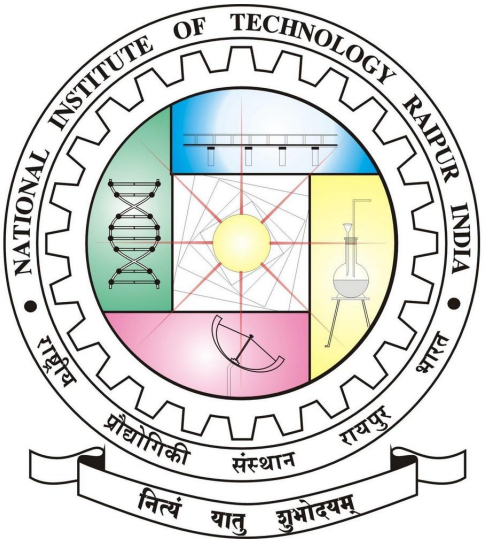

National Institute of Technology
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assignment 04

Disruptive Innovations

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1 Disruptive Innovations in Healthcare

1.1 Introduction

Disruptive innovation is innovation that creates a new market and value network or enters at the bottom of an existing market and eventually displaces established market-leading firms, products, and alliances.The concept was developed by the American academic Clayton Christensen and his collaborators beginning in 1995 and has been called the most influential business idea of the early 21st century.Lingfei Wu, Dashun Wang, and James A. Evans generalized this term to identify disruptive science and technological advances from more than 65 million papers, patents and software products that span the period 1954–2014.Their work was featured as the cover of the February 2019 issue of nature and was selected as the Altmetric 100 most-discussed work in 2019.

Not all innovations are disruptive, even if they are revolutionary. For example, the first automobiles in the late 19th century were not a disruptive innovation, because early automobiles were expensive luxury items that did not disrupt the market for horse-drawn vehicles. The market for transportation essentially remained intact until the debut of the lower-priced Ford Model T in 1908.

1.2 Example of disruption

In the practical world, the popularization of personal computers illustrates how knowledge contributes to the ongoing technology innovation. The original centralized concept (one computer, many persons) is a knowledge-defying idea of the prehistory of computing, and its inadequacies and failures have become clearly apparent. The era of personal computing brought powerful computers on every desk (one person, one computer). This short transitional period was necessary for getting used to the new computing environment, but was inadequate from the vantage point of producing knowledge. Adequate knowledge creation and management come mainly from networking and distributed

computing. Each person's computer must form an access point to the entire computing landscape or ecology through the Internet of other computers, databases, and mainframes, as well as production, distribution, and retailing facilities, and the like. For the first time, technology empowers individuals rather than external hierarchies. It transfers influence and power where it optimally belongs: at the loci of the useful knowledge. Even though hierarchies and bureaucracies do not innovate, free and empowered individuals do; knowledge, innovation, spontaneity, and self-reliance are becoming increasingly valued and promoted.

1.3 Low-end disruption

"Low-end disruption" occurs when the rate at which products improve exceeds the rate at which customers can adopt the new performance. Therefore, at some point the performance of the product overshoots the needs of certain customer segments. At this point, a disruptive technology may enter the market and provide a product that has lower performance than the incumbent but that exceeds the requirements of certain segments, thereby gaining a foothold in the market.In low-end disruption, the disruptor is focused initially on serving the least profitable customer, who is happy with a good enough product. This type of customer is not willing to pay premium for enhancements in product functionality

1.4 New market disruption

New market disruption occurs when a product fits a new or emerging market segment that is not being served by existing incumbents in the industry. Some scholars note that the creation of a new market is a defining feature of disruptive innovation, particularly in the way it tend to improve products or services differently in comparison to normal market drivers.