1. INTRODUCTION / BUSINESS PROBLEM

A) BACKGROUND

New Delhi, the capital of India, is spread across in 1,484 sq. km. and is the largest commercial center in northern India. Against the national per capita income of Rs.1,34,432, Delhi's per capita income stands at Rs.3,89,143 (annual for FY2019-20). The annual GDP growth rate of Delhi is also at 7.42% against national average of 5%. In fact, 85% of Delhi's economic activity is generated in the service sector which is also the driving factor for growth. More specifically, banking and insurance, real estate, trade, tourism and communications are driving the progress in the state. Further, the cumulative FDI inflows to Delhi during April 2000–June 2019 amounted to US$ 89.68 billion.

With such large work force driven by service sector and the limited area of New Delhi in sq. km., recreation activities play a dominant role during weekends considering the higher per capita income of the residents of New Delhi.

It is pertinent to mention that Indian cinema has an annual output of around 2000 feature films per year in Hindi as well as regional languages. Further, maximum foreign language feature films including English films have large viewership in India, especially in metropolitan cities, including New Delhi.

With such attractive economic prospects as well as large viewership of cinemas, property developers have huge opportunities to explore construction of profitable multiplexes. However, arriving at the best location for building multiplexes is one of the most challenging decisions for deriving its prospects of being a success.

B) DESCRIPTION OF PROBLEM

The objective of the Capstone Project is to analyse and select best cluster and location in New Delhi, India to open a new 'Multiplex'. The data science methodology and machine learning techniques such as clustering and statistical plotting library of seaborn have been used to provide best solutions at arriving at the best cluster along with illustrative example to derive location in a neighborhood.

In addition to addressing the query of arriving at the best cluster for a Multiplex in current scenario, the Project also builds a recommendation system on the

basis of various parameters, like type of venues, neighborhood etc. to provide insights into development of 'Multiplex' in New Delhi, India.

C) TARGET AUDIENCE

The target audience in the instant case are investors and property developers keen to invest or construct new Multiplex in New Delhi, India. With the present economic growth rate, heavy dependence of New Delhi on service sector and broad spectrum of feature films being released in India, the development of Multiplex appears to be an attractive business proposal in New Delhi.

D) SUCCESS RATE

With application of data science methodology and use of machine learning techniques, detail insights can be provided to various stakeholders regarding clusters and neighborhoods where multiplexes can be developed.