PROJECT SUMMARY

Ref No.: MRIC-SCA-P07	**Title:** Development of an in Aeroponic Indoor Urban vertical farm using advanced micro-controlled environment
Local Company: Prodesign Facilities Ltd	
Project Leader	
Mr Vickramsing Bhujun	Prodesign Facilities Ltd

TECHNICAL ABSTRACT

The project is for the setting up of a pilot vertical indoor farm using aeroponics and computer controlled internal climate to achieve a much higher yield than traditional farming and higher than hydroponics, per square meter. The pilot farm will be set up inside an industrial building in Valentina Phoenix, belonging to the applicant. Vertical farming is the practice of growing crops in vertically stacked layers. It incorporates controlled-environment agriculture, which aims to optimize plant growth. Current applications of vertical farming coupled with other state-of-the-art technologies, such as specialized LED lights, have resulted in over 10 times the crop yield than would receive through traditional farming methods. The main advantage of utilizing vertical farming technologies is the increased crop yield that comes with a smaller unit area of land requirement. The increased ability to cultivate a larger variety of crops at once because crops do not share the same plots of land while growing is another sought-after advantage. Additionally, crops are resistant to weather disruptions, less crops lost to pest and diseases. Because of its limited land usage, vertical farming is less disruptive to the native plants, fauna and flora. It is also seen as a very sustainable and smart form of agriculture.

Key Words: Smart Agriculture, Food Security, Sustainable agriculture, Innovative crop production