



WORLD GREEN ECONOMY
ORGANIZATION

STRATEGIC FOOD STORAGE & LOGISTIC FACILITY IN UAE

Concept Note

A FIRST OF ITS KIND MODEL FOR AGRICULTURAL PRODUCTS
STORAGES IN UAE





"We want to invest in new agricultural fields and mechanisms by harnessing advanced technologies and make proactive changes in agricultural and food systems"

His Highness Sheikh Mohammed bin Rashid Al Maktoum
Vice-President and Prime Minister of the UAE and Ruler of Dubai

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Background

According to the latest edition of the Global Food Security Index¹, the UAE, in 2019, ranks 21st in food security, recording a 10-place jump from the previous year. This is a testament to the efforts of the government of the UAE to establish the country as a leader in innovation-driven food security. Moreover, the UAE aims to be the world's best country in the Global Food Security Index by 2051 and among the top 10 countries by 2021, and has, in accordance with this goal, launched the National Food Security Strategy 2051, which aims to implement resilient agricultural practices that increase productivity and production, and which help maintain ecosystems.²

The effective storage of agricultural products can be a key aspect of increasing food security and enhancing the ability of the UAE to respond to crises. With a growing population, globalized and diversified food preferences, and in recognition of the multitude of challenges faced by the UAE with respect to food security – given limited arable land and water constraints – storage of agricultural goods is an inevitable strategy to increase food resilience.

The key aspects of availability and access to food stuff are central to food security. Both availability and access are contingent upon secure and dependable cooling and freezing facilities, especially given the year-round hot weather experienced by the UAE. For instance, the availability of vegetable and fruit may not need to be limited by their seasonality given correct refrigeration and preservation practices which provide the benefit of curtailing bacterial activity keeping food fresh for longer. Building domestic food storage capacity is a profitable and strategically critical venture and this document comprises a pre-feasibility study of a strategic temperature controlled food storage and logistics facility to contribute to ensuring food security in United Arab Emirates.



¹ <https://foodsecurityindex.eiu.com/Index>

² <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/federal-governments-strategies-and-plans/national-food-security-strategy-2051>

Proposition

CONTEXTUAL/NATIONAL NEED

The UAE aims to become the world leader in food security, to set a global example and to address domestic food security related challenges. Thereby, making this project well aligned with national policy goals while recognizing the urgent need to scale up infrastructural support to achieve these policy goals.

Given the ambitious goals of the UAE pertaining to food security as stated in the National Food Security Strategy 2051, there is a need for enhancing additional domestic capacity for storage of agricultural products in the UAE.

The demographics and preferences of the population of the UAE also demand a focused and innovative approach to infrastructural interventions in support of food security measures, which is offered by this project.

FOOD SECURITY FROM A SUSTAINABILITY PERSPECTIVE

In addition to aiming to become a world leader in food security, the UAE is also a global leader in mainstreaming sustainability and green economy in its operations. This project, will additionally, through its unique design, be a showcase of the potential for green and sustainable operations for investors locally and abroad.

A number of agricultural projects in the region, as well as commodity traders and producers, will be able to benefit from the facilities offered under this project, including the provision of services for the import of agricultural goods – a key sector of the UAE economy, thereby advancing the case of overall national food security.

The facilities under this project additionally will support the meeting of local demand for agricultural products in a sustainable, coherent and consistent manner while also promoting local supply by providing strategic support to domestic food production.

By supporting meeting food security needs in the region, this project also contributes to the achievement of the United Nations Sustainable Development Goals (SDGs) and the National Food Security Strategy 2051 of the UAE.

Given this background, the proposed project fulfils a number of mandates and requirements. This project meets an urgent contextual/national need of the UAE and contributes to overall food security in terms of the Sustainable Development Goals and other international agreements.



Food consumption is growing at the rate of 12 per cent a year. Looking at climate change and global food demand, we need to ensure we have different plans in place to secure food for today and the future

**H.E. Mariam Al Muhairi,
Minister of State for Food Security**

Objectives



OVERVIEW

The objectives of the proposed project are to apply a unique, innovative, green and sustainable approach to enhancing infrastructural capacity for agricultural products storage in the UAE aligned with the priorities and leadership vision of the UAE pertaining to food security and with the mandate and scope of the WGEO as a leading organization of the green economy and the project proponent of this venture.

SPECIFIC OBJECTIVES

1

Specifically, this project will contribute to:

- Supporting strategic food security
- Upgrading the quality & variety of food distribution
- Add value to fresh food reserves
- Supporting strategic fresh food reserve
- Providing strategic support for small scale local food production
- The application of sustainability and green economy principles to the food security ecosystem thereby aligning with the SDGs and the Paris Agreement.

As previously mentioned, enhancing food security and resiliency is a key aspect of the developmental plans of the UAE in the near and long-term future. This project, keeping this aspect as a focus, aims to:

FOOD SECURITY

2

- Transform the way that the storage of agricultural products is implemented in the region by bringing state-of-the-art techniques of storage well suited to the unique conditions of the UAE and implement them in a green and sustainable manner.
- Minimize agricultural product waste and loss in the UAE by employing a circular – use, reuse – model of operations.
- Minimize domestic price fluctuation of agricultural goods by ensuring the consistent access and availability of agricultural products to meet changing demand.
- Enhance overall food security in the emirates.

GREEN ECONOMY SHOWCASE

3

By bringing together the critical aspect of food security with the operational model of green economy, this project serves as a showcase for achieving cross-cutting objectives via sustainable methodologies. This project will:

- Establish a successful business model which meets the criteria of green economy and can be replicated globally.
- Be a sample case for local investment and global investment.
- Generate decent green jobs domestically.
- Support the achievement of the SDGs, thereby advancing the UAE's SDG agenda.

Project Description

LOCATION

The location chosen for this project fulfils a strategic purpose. The proposed location is accordingly near the Jabel Ali Port and Makhtoom Airport. The location is also close to the highway. These aspects of the location therefore provide strategic access by air, land and water – an added-value critical to ensuring nation-wide access to the stored products.

AREA REQUIRED

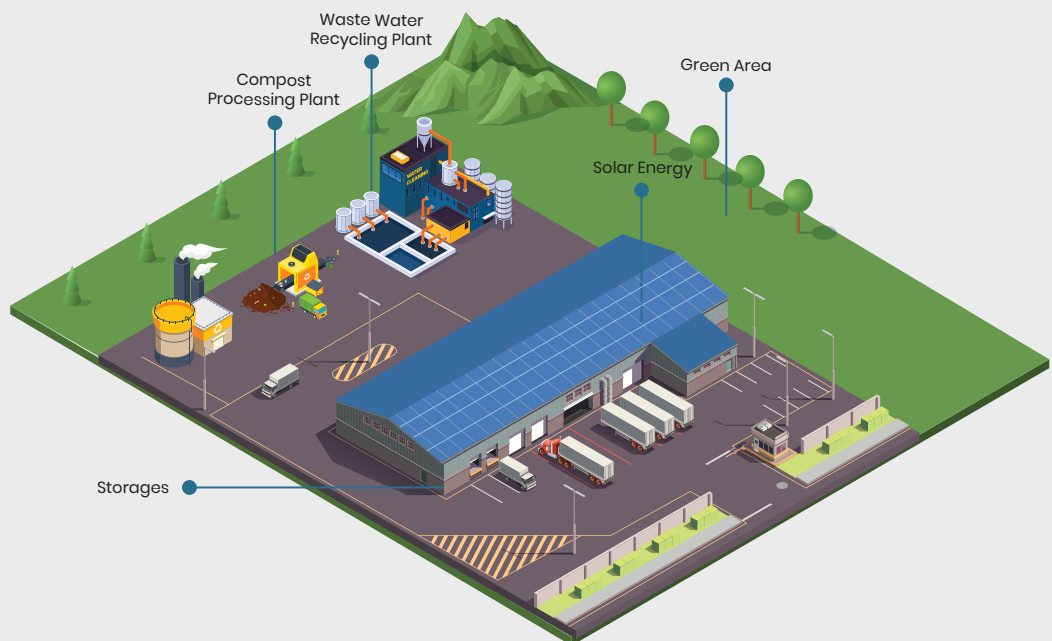
The minimum area proposed for the facilities in accordance with the objectives is that of 75,000sqm or more.

TECHNOLOGY

The latest available cutting-edge technology will be used to operationalise this project.

GREEN ECONOMY

The facilities should ensure alignment with green economy principles and standards and moreover be developed to be environmentally sustainable.



SITE SPECIFICS

Storage (Frozen, cold and dry)

- Different temperatures will be operationalized through the facilities, diversified as per the storage requirements of various products
- Solar energy is posited to be utilized to power the facilities

Waste water treatment unit

- The waste water generated from operations will be treated in accordance with water security guidelines.
- Overall lowered contamination
- Use of treated water for the green area (reduce the effect of climate change and consequently align with green economy principles)

Compost unit

- Use the waste from agricultural products in storage
- Convert the waste in to compost (Green economy)
- Use the compost for the green area and for selling in the open market (increased revenue).

Considering capacity building and training (as part of WGEO mandate).

Considering the Corporate Social Responsibility concept (CSR) (as part of WGEO mandate).

Other components may be considered/added during the course of the feasibility study.

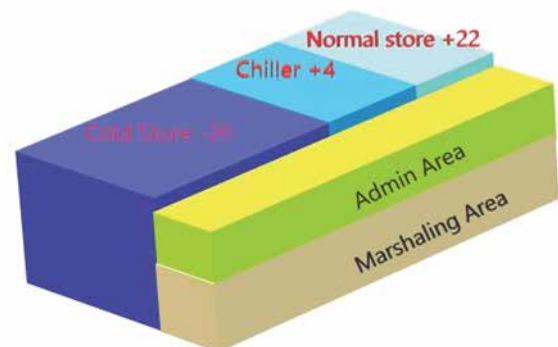
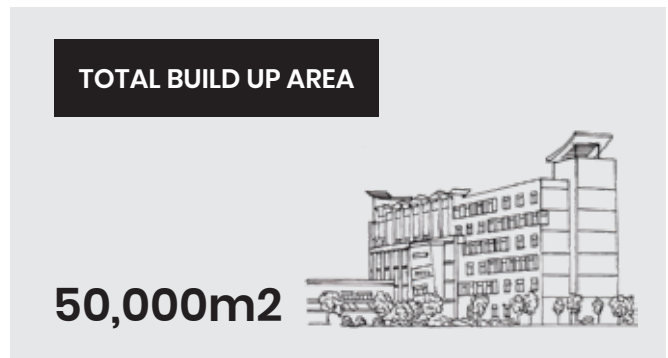
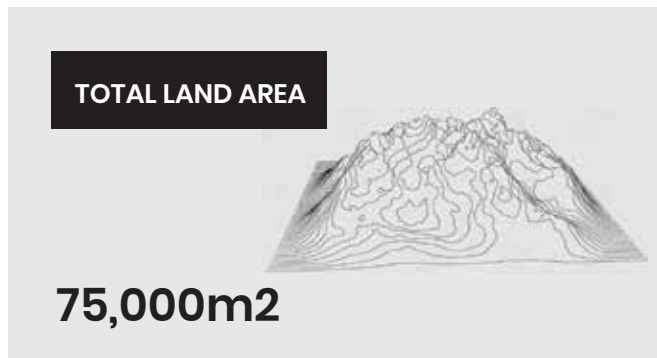
FUTURE DEVELOPMENT

The facilities will support the future food supply chain developments and will be aligned with national food security and green economy plans and with key international frameworks such as the 2030 Agenda and the Paris Agreement.

Technical & Financial Details

DETAIL OF PROJECT COMPONENTS

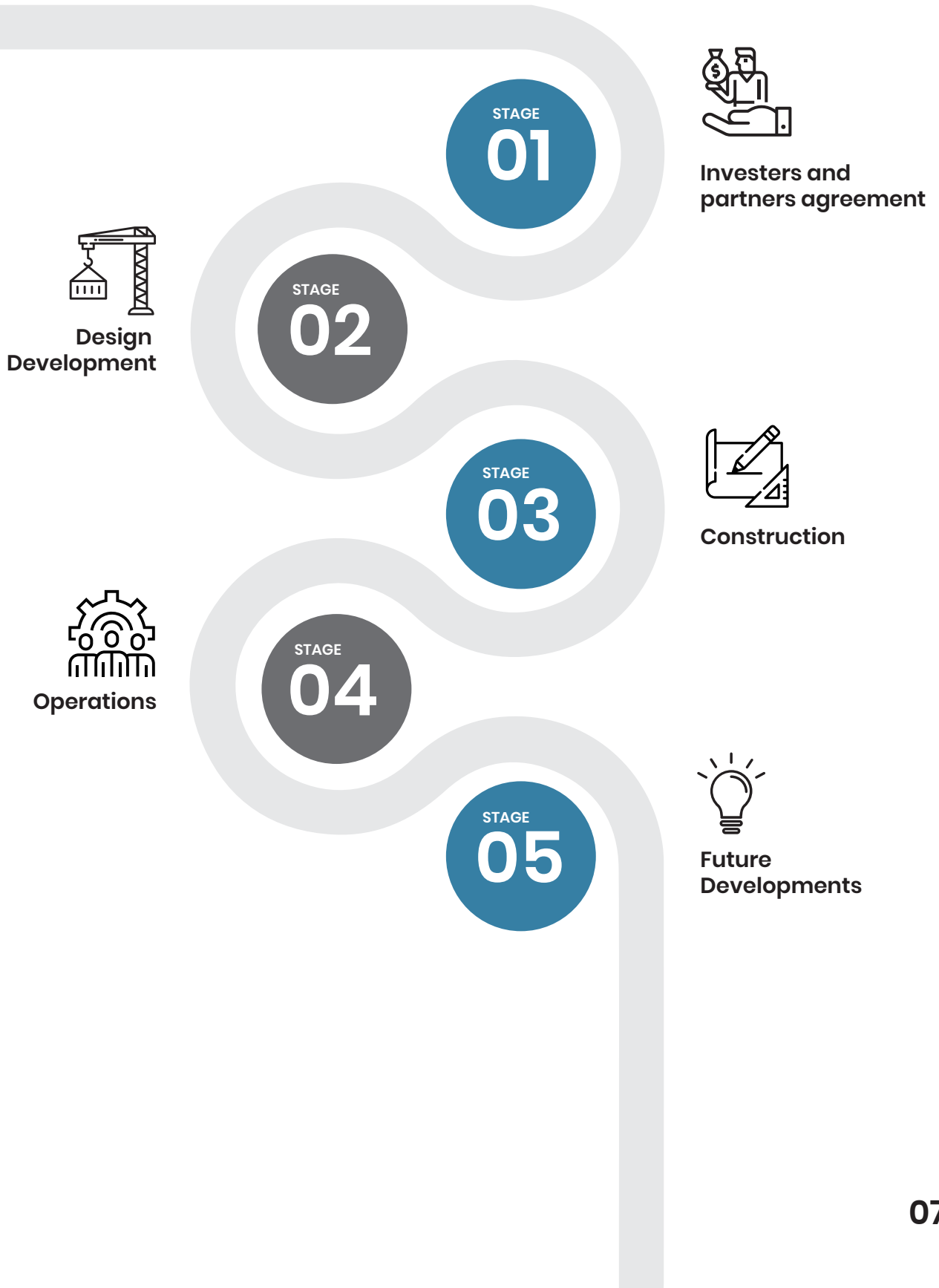
Area Segregation



Cooling Operations

SI No	Description	Temperature	Area / volume	Unit	No of pallets
1	Cold store	- 18 to -20	75000	M3	50000
2	Chillier	+4 to -4	30000	M3	20000
3	Temperature controlled	+ 18 to + 25	30000	M3	20000
4	Marshalling area	+ 18 to + 25	5000	M2	
5	Administration Area	+22 to + 25	5000	M2	

Project Stages



Scope of Detailed Feasibility Study

In order for this project to move to the next stage of implementation, a holistic feasibility study would need to be undertaken. This Feasibility Study would comprise of two major sections:

PROJECT IDENTIFICATION AND MARKET STUDY

The project identification component of the Feasibility Study will explore the existing socioeconomic framework within the UAE while considering the readiness of the market for the initiation of the proposed project. Namely, this section will comprise of the following areas:



The Market Readiness Study will establish the economic evidence base for the consideration of this project. It will do so by assessing the demand trends for agricultural product storage for the last five years; establish an estimate of projected capacity demand for agricultural products storage facilities; estimate the existing capacity of agricultural products storage in the UAE; assess the demand gap for domestic capacity for agricultural products storage. Furthermore, this will be supported by an estimate of the anticipated market size and the market share of the proposed project while elaborating on the competitive environment, main competitors, prices, offerings, capabilities, and the comparative advantage for the proposed project.



DETAILED TECHNICAL AND FINANCIAL FEASIBILITY STUDY

The detailed technical and financial feasibility study will significantly expand on the information presented within the pre-feasibility study in terms of providing a detailed examination of:

- The various components of the project, including the project concept, objectives and justification;
- The technical aspects of the project, comprising among other components, the project design and functionality, process descriptions, applied technologies and their origins, while also elaborating the green economic principles at the foundation of the project;
- The project components, including the associated investment and production costs;
- The proposed financial model of the project and a financial analysis for project set-up and operations;
- The project's business model, including fixed and variable costs, marketing plans and revenue generation timelines and projections;
- An impact assessment of the project covering potential threats and opportunities.

Conclusion

This document lays out an overview pre-feasibility study in anticipation of the next steps – the undertaking of a comprehensive feasibility study. The proposed project presents a facility that will act to greatly enhance strategic food storage and logistics ensuring food security in UAE in alignment with the medium- to long-term food security and sustainability goals of the country while considering progress towards the SDGs and the Paris Agreement.



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For more info

