COMMERCIAL VERTICAL FARMING INITIATIVES

SPREAD

KEY ELEMENTS:
- **VISION:** SPREAD’s eco-friendly vertical farming solution is designed to deliver fresh produce in fully protected environments. “In continuing this type of industry, we can help to ensure a future where we and our children reap the benefits of these endeavors”, says President/CEO Shinji Inada.
- **TECHNICAL INNOVATION:** the farm uses a closed-loop hydroponic system in combination with sunlight and artificial fluorescent lighting.
- **ORGANIC:** crops are pesticide-free and the fertilizers used are completely organic.
- **CHANNELS:** they currently distribute their product to 2,000 stores in Japan, to 700 restaurants, and other venues such as hotels and amusement parks.
- **MARKETING:** the company uses a combination of communication channels, covering traditional media, own website, and social media. SPREAD’s main focus is on promoting their vision of a more sustainable planet, being market leader, how fresh their crops are, and more healthy than traditionally grown lettuce.
- **FINANCE:** is a collaboration between two private corporations, SPREAD Co. Ltd. and Obayashi Corporation.
- **PARTNERS:** SPREAD has partnered for education and research with a range of Japanese universities.
- **EMPLOYEES:** they have approximately 100 employees, who receive access to continual education and development programs.

IMPACT – ENVIRONMENTAL AND SOCIAL

The closed-loop system of production reduces waste and minimises the carbon and environmental footprint. The crops are all organic: without any pesticides, from organic seeds, and producing organic waste. The SPREAD model shows that competitively priced crops can be made available all year round, without being dependent on climate or local weather conditions, potentially reducing the need for transportation pollution if applied worldwide.

In recent years, Japanese companies have sought solutions to the increasing need to handle the huge urban populations, concerns about sustainability and the pressures on the environment. This has led to Japan being one of the pioneers in closed-loop, urban vertical farms. SPREAD has the largest market share of vertical farms in Japan and produces 770 tons of crops per year. SPREAD call their farming system a ‘Vegetable Factory’. They currently have one location, built close to Tokyo. In Spring 2016, they intend to develop a second location near Tokyo, which will be fully automated except for germination confirmation which still needs human eyes. This full automation, they hope, will bring costs down to ensure produce can be sold cheaper or at the same price as traditional farm crops.

IMPACT – BUSINESS

The Kameoka vertical farm produces 7.7 million heads of organic lettuce per year, which equals about 770 tons of produce. It is the largest producing vertical farm in the world. Unlike other indoor vertical farms, SPREAD can sell its lettuce at the same price as traditionally grown lettuce; making it accessible to all consumers.

| Location: Washington, USA. |
| Location: Kameoka Kyoto, Japan |
| Size: 1 80,000 m² |
| Year Commercial: 2013 |
| Crops: lettuce |
| Founders: Shijin Inada (owner Spread corporation) and Toru Shiraiishi (owner Obayashi corporation) |
| Partners: SPREAD Corporation and Obayashi Corporation collaborate with various Japanese universities |

1 This is the total growing area, which is divided into several layers. Actual floor space is 9,400 m²