

# Business Talk

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THE BUSINESS LEADERS

INFLUENTIAL  
BUSINESS  
LEADERS  
OF THE  
YEAR  
2021

HOW TO BE A LEADER?  
TOP 10 EFFECTIVE TIPS

A portrait of Chris Bolton, a middle-aged man with short grey hair and a goatee, wearing a black polo shirt with the Sprout AI logo. He has his arms crossed and is looking directly at the camera with a slight smile. The background is dark and out of focus.  
**CHRIS  
BOLTON**

CHAIRMAN OF THE BOARD,  
CEO AND FOUNDER OF SPROUT A.I S.A.,

FOLLOW NOW



# Sprout AI

Beyond Farming



# SPROUT AI BEYOND FARMING

RESOLVING THE IMPENDING FOOD-SHORTAGE CRISIS

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The Company's vision is to be the leader in sustainable vertical cultivation technology. We are committed to both environmental and social sustainability, thus our adaptive AI monitored fogponic system generates less waste and requires a fraction of the water needed for traditional outdoor or hydroponic farming. With a lowered carbon footprint, Sprout AI provides solutions to many of the negative environmental impacts generated by conventional farming methods, while answering the to every grow issue of food insecurity.

Almost 80% of the world’s population relies on imported food. This is unsustainable, and as a result of COVID-19’s impact on supply chains requiring long-distance travel, the cost of food has soared while the quality has declined. For several countries, this has now become a severe national food security concern. Ministers of Agriculture and Finance now recognize the actual cost of not bringing the farm back into the cities.

A new study led by the UN agriculture agency, presented at the COP26 climate conference in Glasgow, listed the food supply chain at the top of the greenhouse gas emitters list.

It’s no secret that the traditional agricultural industry’s future is concerning and in desperate need of reform. Overall, the population is increasing at a rate of roughly 1% each year, with certain nations rising even faster. As time goes on, feeding this expanding population will undoubtedly become a difficulty.

To make matters worse, present and previous farming techniques have been found to be extremely damaging to the environment. Climate change, deforestation, and soil deterioration have all been linked to agricultural practices. The situation is so serious that we appear to have lost a third of our arable land in the last 40 years. To prevent harming the world and generating worse issues for future generations, we must develop better ways to produce food.

Fortunately, modern agricultural technology such as vertical farming provides an ideal method to address these issues and supply the food that future generations will require.

Chris Bolton, Founder & CEO of Sprout AI Inc. talks about the importance of vertical agriculture and how Sprout AI’s technology can meet growing food demands in a sustainable way.

Sprout AI Inc is a technology company that uses its proprietary systems and technologies to plan, design, manufacture, and/or assemble vertical urban and controlled environment agriculture and farming cultivation equipment consisting of multi-level rolling racks populated with self-contained and environment-controlled habitats.

Using vertically stacked layers, farmers can produce a lot more food on the same area of land. Vertical farming takes significantly more than merely stacking plants and hoping for the best. The approach requires temperature, light, and humidity adjustment to be successful. If a delicate balance is not maintained, a complete harvest can be lost, just as a traditional crop could in the event of a drought or flood.

**WHAT IS SO UNIQUE ABOUT SPROUT AI INC?**

Sprout AI’s technology allows farmers to cultivate indoors using modular habitats on rolling racks. Their technology utilizes dual plant and root zones to offer the

maximum effectiveness of different environments and combines it with fogponics to deliver the nutrients required for growth. Fogponics uses a fraction of the water required by aquaponics, hydroponics, and aeroponic irrigation technologies.

***“In comparison to traditional hydroponics, we aim to give vertical farmers more value, lower their cost, give them more yield, and higher content levels in their crops.” adds Chris.***

While the initial cost of setting up a vertical growing system can be high (depending on the scale of operation), once it’s up and running, it only has modest recurrent costs—especially when you consider the combined returns.

Sprout AI has designed a V2 system that manages excess heat, and when coupled with its robust air sanitation and dehumidification technologies, it is able to produce more water than used, making Sprout AI V2 uniquely water neutral.

***“Our system is designed to optimize power use, switching to green power sources, as well as utilizing existing power voltage and frequency to operate making it truly universal to set up and operate globally,” adds Chris.***

**MEET CHRIS BOLTON TO KNOW MORE ABOUT HIS REVOLUTIONARY SUCCESS IN THE WORLD OF VERTICAL FARMING**

Chris spent part of his teenage years on a farm that farmed numerous crops in a short growing season. There he experienced how tough it was to not only get the crop from seed to final harvest, but also to reproduce the plants across the field, and from one crop to the next. There was usually a lot of variety. Clearly, variations in access to sunshine, temperature, humidity, and water moisture had a lot to do with it. Chris recalls and shares,

“It wasn’t until I was CEO of Benchmark Labs, an ISO 17025 certified and accredited lab, I fully understood the impact slight changes in soil type, soil compaction, aeration, and nutrient level or accessibility had on crop batch repeatability. With that understanding, it became clear that in order to replicate a batch, we first needed to control the major causes of crop variation.”

Indoor vertical farming gave him the opportunity to design a solution involving integrated systems to manage this level of control. In his endeavor to control these causes of variation, he developed a system that separated the root zone from the plant zone.

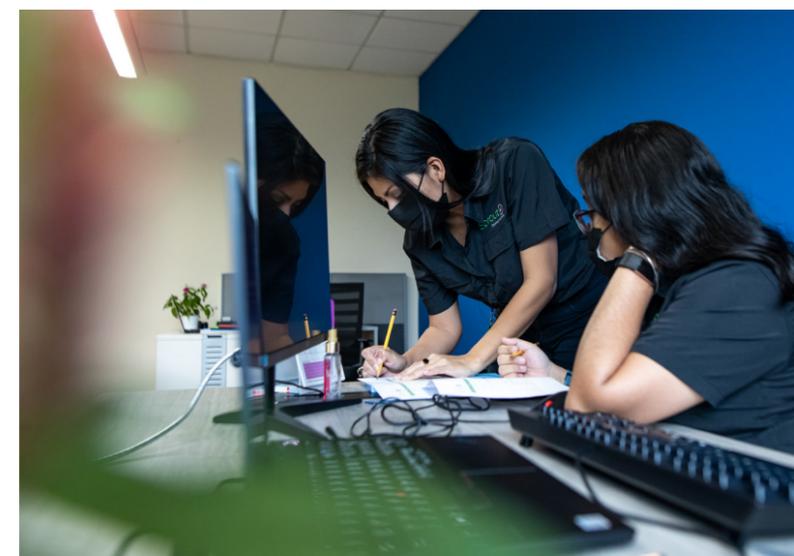
***“ To our surprise, that is where the magic happens. When roots are free to grow in a hermetic and highly oxygenated environment, whereby they only get nutrients when needed, at a particle size that optimizes absorption, at a temperature that is optimal to the roots (not the plant above the roots), we saw things no one had reported to have observed before. To our surprise different plant species have roots that behave very differently – no 2 plants behave the same way. Some need to touch each other, some need to race downward to find a bottom, some need to spider out in all directions horizontally until they hit an obstruction, before they decide it’s time to rapidly grow vertically. Knowing this we’ve made a lot of strides in reducing cycle time and crop yield.”***

**EMERGING STRONGER FROM THE PANDEMIC**

The worldwide COVID-19 epidemic is a human calamity of unprecedented magnitude and complexity. It’s putting a burden on agriculture systems, government finances, and many organisations’ ability to cope with the changes. Many cities are now focused on bringing the farm back into the city, keeping the revenue within the local economy, while at the same time ensuring food quality and traceability.

During the pandemic, in a time of uncertainty and restrictions, Chris has to put a pause on business. However, the Sprout AI Team was formed again in late 2020. Their new team is particularly data-driven and searching for new methods to better all of their critical performance indicators (KPI’s). Their R&D and design engineers have also been physically relocated to the same work location as their assembly team. R&D conveys what it requires to engineering, and engineering designs what assembly is capable of producing. Each one has an immediate effect on the other. As a result of their direct collaboration in the same workspace, the organisation has been able to plan, create, and execute continuing innovations and improvements more quickly.

**“For cities to be environmentally responsible, sustainable, and provide good governance (ESG), indoor cultivation technologies must be embraced” Chris adds.**



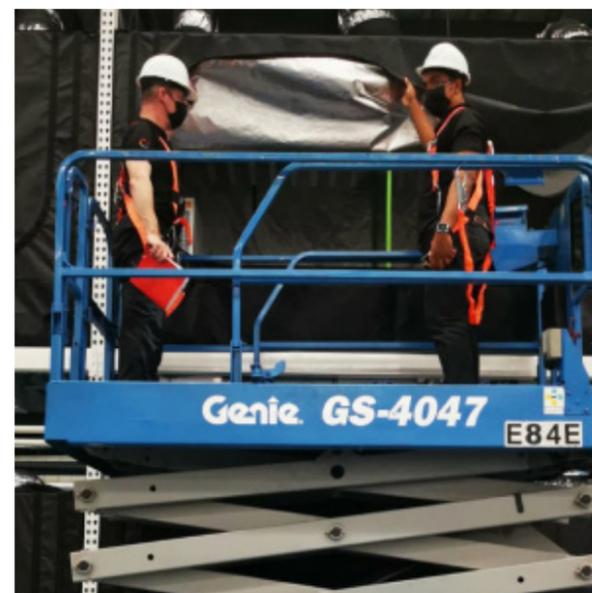
**THE FOUNDER STEERS**

*"We were launched undercapitalized, in a market that was highly volatile, during a global pandemic, resulting in unpredictable currency exchange rates and broken supply chains. Through this firestorm, we learned quickly to be exceptionally resilient, adapt quickly, and how to build on multiple redundancies. But our single largest learning was how to always turn new challenges into new opportunities."*

Sprout AI Inc has included the highest standards in their assembly line process. They are also incorporating a number of ISO standards including 31000 (Corporate Risk), 27400 (Cyber Security), 17001 (Data Security), 17025 (Laboratory), and of course 9001 (Manufacturing) in addition to mandatory OSHA standards.

To promote Team Unity, Chris has always followed what he refers to as the "SandBox Rule". This approach was instilled in him since his days at GE and utilized throughout the decades that followed.

"In our organisation, we have a Sand-Box policy in which we recruit people to use their heads and express their thoughts. During our key decision-making process, we promote disagreement from our traditional thinking. We have a problem, however, if two or more resources who dispute each other on an idea or a conclusion are unable to go "for a beer" at the end of the day. The goal of difficult decisions is to arrive at the best-informed conclusion and then gain mutual agreement. That cannot, however, become a personal issue that negatively affects team performance. Individuals who are



unable to accept a conclusion that may differ from their own at the end of the procedure are not permitted to return to the "Sand-Box." explains the founder.

**FUTURE OF VERTICAL FARMING**

The global vertical farming market size stood at US\$2.13 billion in 2018 and is projected to reach US\$12.04 billion by 2026, exhibiting a CAGR of 24.8 during the forecast period. Countries like Singapore have committed over \$60M as part of their plan to produce 30% of their leafy green / micro-green nutritional needs by 2030 within the city itself.

Vertical farming, which involves growing plants in stacked layers, in a controlled environment, where all environmental factors can be monitored, will become more common in cities around the world. As this is not affected by the weather because its environment is regulated, it will allow farmers to produce crops year-round without fear of unfavourable weather conditions.

Because it is more environmentally friendly than regular farms, which use a lot of water, such farming techniques are bound to grow exponentially.



**FROM THE FOUNDER'S DESK**

"I've led by example by demonstrating that no challenge is insurmountable and that by focusing on the objectives of accomplishing our corporate goal, we simply need to tweak our strategies, plans, and actions to reach where we need to go. After overcoming so many barriers and disappointments in the past, I have shown that despite unimaginable odds, the unthinkable is attainable. Knowing what to do first will pay off, as will working really hard. I believe that every member of our team will leave a lasting legacy by achieving our business aim of being a dominating leader in the indoor vertical farming market."

