

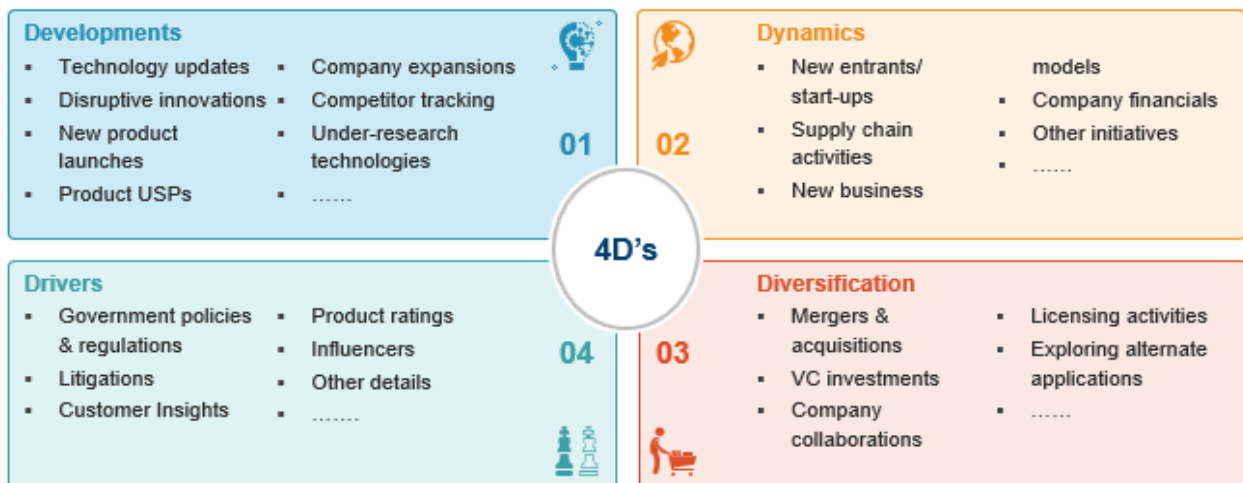
# INTELLOTRACKER

## Controlled Environment Agriculture

May 2023



### ARANCA'S QUARTERLY SECTORIAL UPDATE ACROSS FOUR DIMENSIONS....





## DEVELOPMENTS

Technology/ Innovations		Purdue University researchers have designed two simple LED lighting strategies to increase yield and reduce energy costs for the vertical farming sector of indoor agriculture. <i>Source: <a href="#">University News</a></i>
Product Launch		Vertical farming leader Oishii has launched The Koyo Berry, a strawberry with refreshing sweetness, balanced acidity, fragrant aroma, and slightly firm texture. Each tray of Koyo Berries is non-GMO, pesticide-free, perfectly ripe, and always in season. <i>Source: <a href="#">Urban Ag News</a></i>
Technology/ Innovations		Researchers at Tennessee University have found that the seedling light intensity strongly influences seedling, yield, morphology, and carotenoid content of Green-Leaf Butterhead Lettuce produced in controlled environment systems. <i>Source: <a href="#">MDPI</a></i>
Technology/ Innovations		Intelligent Growth Solutions (IGS) has standardized New Relic (an observability platform) over its vertical farming towers. By adopting New Relic, IGS has been able to reduce its monitoring spend and free up its software development team to work on tasks that help the company meet the growing demand for sustainable agriculture solutions. <i>Source: <a href="#">Vertical Farm Daily</a></i>
Technology/ Innovations		Advanced Container Technologies (ACTX), announced a new line of GrowPod Controlled Environment Farms (transportable). GrowPods protect the growing environment from pathogens, contaminants, and facilitate cultivation without the use of pesticides/harmful chemicals. They are designed for plug-and-play use and are perfect for restaurants, grocery stores, and farmers. <i>Source: <a href="#">PR Newswire</a></i>
Product Launch		Grow-Tec has launched the world's first grow rooms for tomatoes and cucumbers that can produce unprecedented yields. The cucumber grow rooms are projected to produce over 1,000kg/m <sup>2</sup> and tomato grow rooms are projected to yield 800kg/m <sup>2</sup> by the end of the year. This is 10 to 20 times higher than the most advanced greenhouses. <i>Source: <a href="#">The Future of Food Production</a></i>
Product Launch		AeroFarms, a certified B Corporation and world leader in indoor vertical farming has officially unveiled AeroFarms AgX, its newest cutting-edge indoor vertical farm, focused on bringing innovative Research and Development to the UAE and the Middle East. <i>Source: <a href="#">Company Website</a></i>
Technology/ Innovations		AgriFORCE Growing Systems has been granted a patent (from the USPTO) titled 'Structures for Growing Plants' related to its FORCEGH+ facilities. FORCEGH+ has revolutionary facility designs that harness the power of the sun, advanced hydroponics providing precise and consistent high-yield crop growth cycles, and the ability to be deployed virtually anywhere. <i>Source: <a href="#">The Future of Food Production</a></i>



## DYNAMICS

New Facility		Freshbay plans to launch a large-scale, deep earth geothermal powered, 19-acre controlled environment agriculture facility in Canada to promote local production of fruits and vegetables and boost the local economy by creating ~450 jobs. The project will use cutting-edge vertical farming technologies, greenhouses, and scientific horticulture procedures to create 100% sustainable operations. <i>Source: <a href="#">PR Newswire</a></i>
Company Relocation		iFarm has announced the relocation of its global HQ from Europe to the UAE. Relocating its headquarters to UAE is part of iFarm's major expansion into the Middle East, and the company plans to use this base to extend its reach into the Asia-Pacific region as well. <i>Source: <a href="#">Vertical Farm Daily</a></i>



## DIVERSIFICATION

Company Collaboration	 	80 Acres Farms has collaborated with Siemens to work on the optimization, automation and control of indoor farming facilities and processes. Siemens will support the industrialization and scaling of the 80 Acres' proprietary 'Loop platform' – a comprehensive solution that encompasses crop management software and algorithms, environmental controls, robotics, and automation. <i>Source: <a href="#">Company News</a></i>
VC Investment	 	BASF Venture Capital invests in WayBeyond, an innovative IoT SaaS startup serving the controlled-environment agriculture industry. WayBeyond provides a digital agronomy solution combining crop sciences, data and AI to increase crop yield and quality. <i>Source: <a href="#">Company News</a></i>
VC Investment		French startup Futura Gaia has raised €11 million in a second funding round to reach industrial scale. It designs and markets ready-to-use vertical farms that offer soil-based automation and are complementary to open-field and greenhouse agriculture. <i>Source: <a href="#">EU-Startups</a></i>
Company Collaboration	   	Edible Garden AG has announced a research partnership with the New Jersey Institute of Technology (NJIT), the United States Department of Agriculture (USDA) and the Environmental Protection Agency (EPA), to study the impact of nanobubble technology on food safety of fresh produce and processing procedures in a CEA environment. <i>Source: <a href="#">The Future of Food Production</a></i>

Mergers & Acquisitions	 	<p>Pipp Horticulture has acquired Grow Glide Assets, the acquisition solidifies Pipp’s position as a leading provider of indoor commercial mobile vertical grow racks, greenhouse structures, and air circulation systems in North America.</p> <p>Source: <a href="#">Vertical Farm Daily</a></p>
------------------------	------	--

## DRIVERS

Government-Company Collaboration		<p>The National Agricultural Development Company (Nadec) has entered a strategic partnership with Pure Harvest to deliver a large-scale national food security project. Pure Harvest will design, construct, and operate high-tech, climate-controlled hybrid food production systems that allow year-round production of high-quality, safe, and sustainably grown fresh fruits and vegetables, offering Saudi consumers a constant availability of high-quality fresh produce.</p> <p>Source: <a href="#">Saudi Gazette</a></p>
Government Grant		<p>Wyoming’s State Loan and Investment Board (SLIB) approved a grant of \$20 million to support development of the world’s largest and most advanced vertical farming research center in Laramie. Plenty Unlimited – a company dedicated to advancing the emerging technology field of indoor agriculture – will be operating in this new facility.</p> <p>Source: <a href="#">Government Delivery</a></p>
Government Grant		<p>United States Department of Agriculture National Institute of Food and Agriculture (USDA NIFA) has awarded a \$10 million grant to Clemson University to study development of a controlled environment agriculture platform for growing salt-tolerant crops – mustard greens, cucumbers and tomatoes – using saline water for irrigation.</p> <p>Source: <a href="#">University News</a></p>
Government Collaboration		<p>Pakistan Agricultural Research Council (PARC) and Republic of Korea are working jointly on the seed potato production through aeroponics technology, and a second crop is ready to harvest at PARC-National Agricultural Research Centre Islamabad.</p> <p>Source: <a href="#">The Future of Food Production</a></p>
Government Policy		<p>Governor Glenn Youngkin announced March as Virginia Controlled Environment Agriculture Month to highlight the importance and impact of next-generation agriculture to the Commonwealth of Virginia.</p> <p>Source: <a href="#">Virginia Department of Agriculture and Consumer Services</a></p>

## SOLUTION PORTFOLIO – TECHNOLOGY RESEARCH & ADVISORY

 IP Strategy	 Technology Intelligence	 Growth & Strategy
How best can we proactively manage and monetise our technical knowhow / intellectual property?	How best can we keep abreast of technology trends, competitor activity and headwinds / tailwinds in our domain?	Which technologies do we invest in? How do we ensure quick wins? Speed to market?
<ul style="list-style-type: none"> <li>▪ IP Portfolio Analysis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Competitor Benchmarking</li> </ul>	<ul style="list-style-type: none"> <li>▪ R&amp;D Strategy Roadmaps</li> </ul>
<ul style="list-style-type: none"> <li>▪ IP Monetisation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tech / IP Landscapes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Technology Scouting</li> </ul>
<ul style="list-style-type: none"> <li>▪ IP Valuation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Technology Watch</li> </ul>	<ul style="list-style-type: none"> <li>▪ Open Innovation</li> </ul>
<ul style="list-style-type: none"> <li>▪ Prior Art Searches</li> </ul>	<ul style="list-style-type: none"> <li>▪ Market Analysis / Trends</li> </ul>	<ul style="list-style-type: none"> <li>▪ Product Development</li> </ul>



GROWTH  
ADVISORY



INVESTMENT  
RESEARCH  
& ANALYTICS



VALUATION  
& FINANCIAL  
ADVISORY



TECHNOLOGY  
RESEARCH  
& ADVISORY



PROCUREMENT &  
SUPPLY CHAIN  
INTELLIGENCE

This material is exclusive property of Aranca. No part of this presentation may be used, shared, modified and/or disseminated without permission. All rights reserved.