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**Indoor Agriculture: Building an  
Executive Leadership Team to  
deliver success at scale**

# Introduction

Indoor Agriculture refers to the practice of growing crops in human-controlled enclosures. This typically occurs indoors and utilizes several kinds of technologies, most commonly hydroponics (growing crops with the use of minerals dissolved in water as opposed to soil), aquaponics (utilizing aquatic animals to fertilize hydroponically grown plants), and vertical farming (growing crops in vertical stacks).

In recent years, Indoor Agriculture has gained popularity due to its green potential, and it is projected to reach US\$33.02B by 2030 (Grand View Research, 2022). This form of agriculture allows for the creation of high-quality, pesticide-free crops whilst lowering carbon emissions and appealing to consumers who are increasingly worried about the source of their food. Looking through the lens of Infrastructure Capital, the increased demand and long-term necessity for sustainable and locally sourced foods indicates increasing opportunities to invest in a reliable and scalable asset class. Building, operating and maintaining indoor agriculture facilities requires high CapEx expenditure which further invites Infrastructure investors to take a lead role in the growth of the sector.

As we have seen with many high-growth, nascent sectors, the Indoor Agriculture industry is experiencing an inevitable talent shortage paired with a universal skills gap. As with other industries linked to the energy transition and experiencing significant disruption, leadership teams must be assembled based on key situational experiences and functional capabilities which currently can only be sourced from adjacent sectors.

Through our research, it is clear there is a strong sentiment across many Infrastructure funds that even if not now, Indoor Agriculture has the potential to be a viable asset class as business models become more consistent and potential target acquisitions reach scale. For the investors that have already deployed capital in the space, there are hurdles associated with being a first mover, some of which have contributed to the downfall of several businesses in the last 12 months. For investors wishing to deliver ambitious value creation plans, securing the right talent is critical, even more so across the leadership team.

## The opportunity for Infrastructure Capital

The Indoor Agriculture industry presents a significant opportunity for Infrastructure Capital. Historically, the field has been dominated by Venture Capital investment, however as technology becomes less of a risk factor and the market demands higher output, new opportunities will emerge for different types of investors. Infrastructure investors are well positioned to scale such platforms as they have done across other high CapEx industries that focus on long-term, efficiency-focused business models. For example, indoor farms and data centers both require vast amounts of energy to operate. Indoor farms need energy to power LED lights, HVAC systems, and other equipment required to grow crops indoors, while data centers need to power the servers and cooling infrastructure. The ability to create synergies opens the door for Infrastructure investors looking to make the first move.

**Matt Hammond, Partner at Foresight Group comments**  
**“These assets are going to need to deliver consistently for about 20 years. The success of these high CapEx assets will rely on investors with long-term and sustainable ambitions like Infrastructure Funds but will require an understanding of a relatively dynamic business model”**

There are also undeniable levels of market security within the food industry. It is less cyclical, with broader market dynamics having less of an impact on the overall demand for produce at the consumer level. This offers a degree of certainty to investors looking for predictable returns.

As long-term offtake agreements become commonplace in the market, investment opportunities will increase.

**Jason Ghoshhajra, an investor at Orion Infrastructure Capital involved in identifying opportunities in the space comments** **“This is an industry that needs to exist. As there are increased consistencies in the business model such as standardised facility designs and long-term offtake agreements, it will become a more viable investment”**

Indoor Agriculture also plays a significant role in global ambitions to reach net zero. It is one of the few industries that allows true engagement at an individual consumer level. In a study conducted by YouGov in 2022, they found that on average global consumers would prefer to buy locally sourced food. Indoor Agriculture can provide that, reducing the carbon impact of transportation. From an investor’s perspective, this is a potentially exciting asset class that could provide significant returns whilst contributing positively to the green economy.

## Challenges facing investors

Through our research, we have identified several challenges affecting the viability of investment and successful scalability of indoor agriculture assets. Operationally there are obstacles surrounding the design and build of indoor farms. Namely being able to replicate the construction template to develop new facilities on time and on budget. Commercially, there are hurdles in securing long-term offtake agreements with large food retailers. Equally businesses are still exploring routes into the many segments that make up the food service industry as well as additional revenue streams across tangential industries, such as pharmaceuticals.

Whilst the demand for produce is still increasing, challenges remain where it relates to the design and build of new facilities. To date, the Indoor Agriculture industry has been focused primarily on technology and innovation. In doing so there have been many pilot facilities and an equal number of new technologies. Whilst in its developmental phase, the industry has been slow to adopt standardised building practices, which in turn has stalled the viable scalability of projects. Combined with the high CapEx requirements per facility and volatile costs associated with global energy prices, these factors have stood in the way of successful growth in many businesses. To solve this problem and create a scalable model, the industry will need to develop best practices, likely adopting the frameworks implemented in similar industries to achieve this.

Commercially, there are still clear hurdles to breaking into the large food retail markets and the fragmented food services industry. Margins associated with large food retailers are characteristically tight, requiring the successful negotiation of profitable margins, underpinned by the ability to grow produce at the scale required. Whilst the food service markets are potentially more suited to the current output capabilities of

Indoor Agriculture facilities and their emphasis on quality of produce, those same markets are highly fragmented and time intensive to develop. Matt Hammond reflects on some of the challenges Foresight Group's portfolio companies are addressing and comments, "The key challenge is the variability of offtake markets, as illustrated more than ever by recent events. There will be little contractual price certainty so offtake will depend on diversity, brand, relationships, and varying production where required. But the depth of food markets and challenges facing alternative supply also make it attractive."

**When looking at where businesses have failed, Suzy Monford, CEO of Food Sport International and former Group VP Fresh at Kroger, asks the question "are the current players in the market putting as much into their commercial strategy as they are in improving their technology?"**

What is clear is that having the right commercial lead to devise and execute the correct go-to-market strategy will be key to successfully scaling an Indoor Agriculture platform.

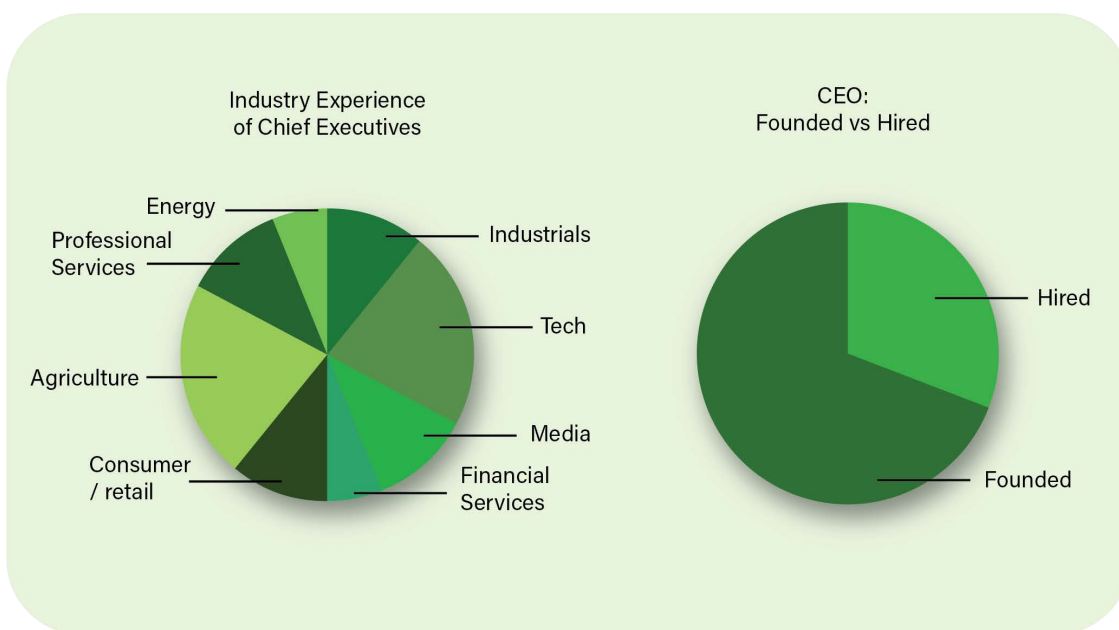
Lastly, as regulation is early in maturity, major players in the industry, including the investors with interests in those companies, will need to work closely with regulators and industry bodies to develop and implement regulations that ensure that the appropriate incentives are in place whilst maintaining the necessary quality of produce.

## Research into the existing skills and capabilities of leadership teams across prominent Indoor Agriculture businesses

To gain a deeper understanding of the industry today, we conducted research into the executive career histories of thirteen Indoor Agriculture companies, varying in size, across both the US and Europe. Data points were taken from individuals officially holding a seat on the executive committees of their employer as well as individuals identified members of the leadership team. We have looked to focus on the key positions relating to the CEO, Financial Officers, Operations Officers and Commercial Officers.

### Chief Executive Officer

A close look at the data on Chief Executive Officers demonstrates the breadth of background of these leaders. With Indoor Agriculture companies largely still early in their development there is a trend towards current CEOs having backgrounds that support an understanding of the science, such as agriculture and horticulture, and the current focus of the industry, technology and innovation.



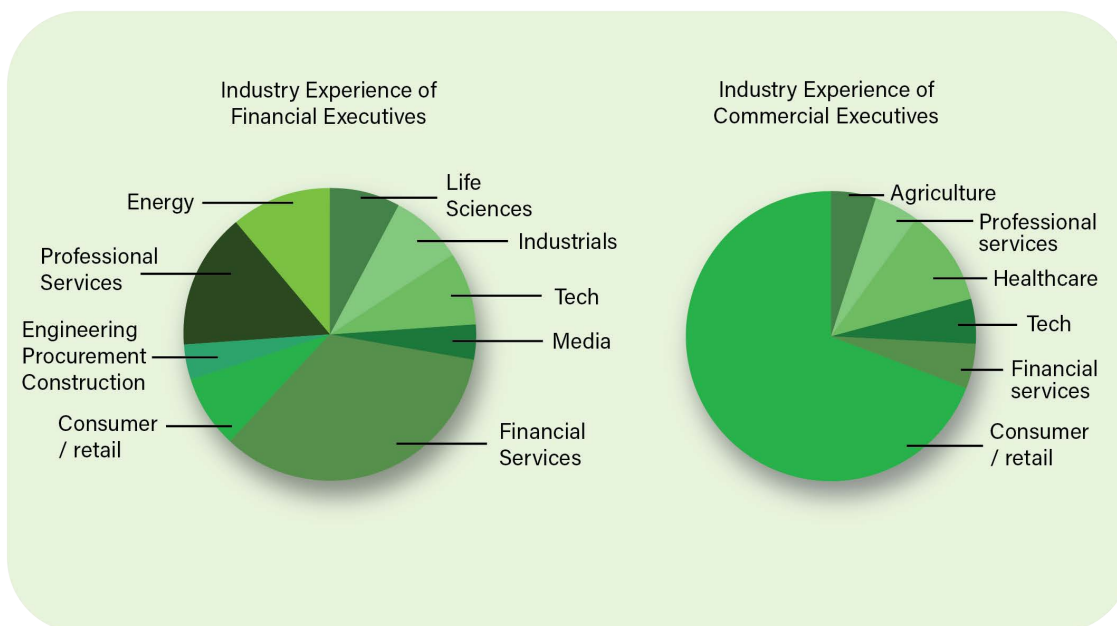
Equally, the businesses in our data set were predominantly founder-led. The companies that had hired external CEO talent had FTEs of >100, representing the more mature businesses within the data set.

## Financial Executives

As would be expected in roles related to the finance function of a company, the career histories are somewhat sector agnostic with the only significant industry experience being in financial services. What is interesting to observe is the skill sets across these individuals. We found that the predominant skill set of financial officers across the data set was M&A and Corporate Finance, with many individuals having spent their early careers in investment banks or private equity funds, indicating the preference for investment savvy leaders who are able to be key contributors to fundraising activities and advise on growth and acquisition.

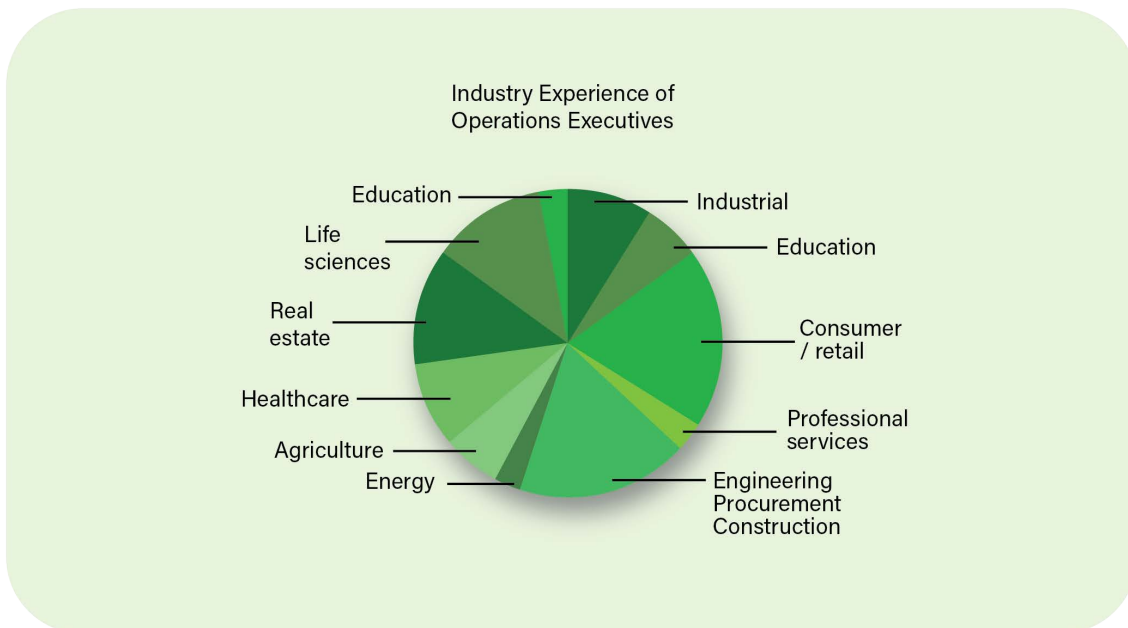
## Commercial Executives

It is clear from our research that the current Commercial Executives predominantly come from the consumer retail industry. Within this, food retail and food services are the predominant segments, with further analysis highlighting previous experience in companies driving disruptive strategies (e.g. vegan food brands). Within the data set companies larger in scale tend to have a Chief Commercial Officer focused primarily on the marketing, product offering, communications and policy, and revenue/sales. Some businesses have chosen to streamline the sales function with a dedicated Chief Sales Officer working alongside the Chief Commercial Officer.



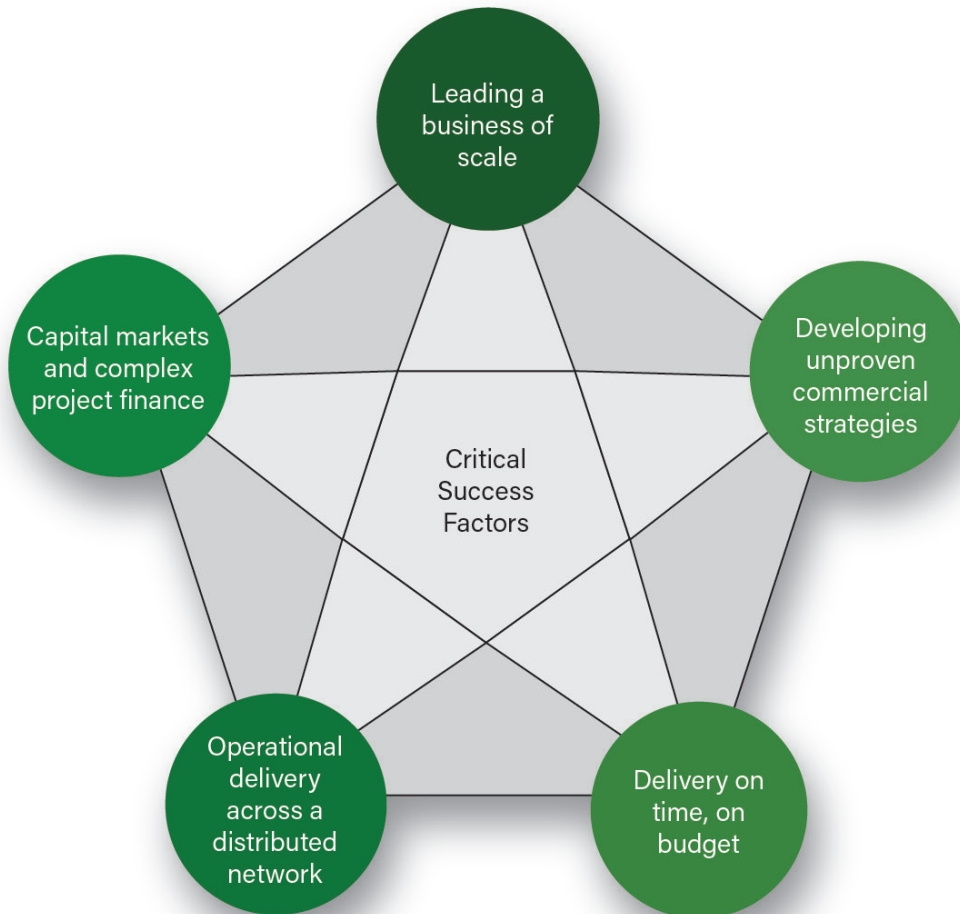
## Operations Executives

Operations Executives within our data set exhibit the most diverse career histories. We observed that the operations functions often included the design and build element in smaller companies, with larger companies separating core operations (supply chain, processes, delivery etc.) and design and build. This is observable in the data, where Operations Executives in businesses focused on development tend to have employed talent from the construction and real estate industries, whereas companies with several operational facilities have looked to prioritise core operational talent from the industrial and consumer industries, again with a focus on multi-site food retail and distribution.



## Recommendations for building an effective Executive Leadership Team

Observing the challenges the industry faces and taking a view on the existing capabilities across our data set we can recommend that when looking at a leadership team holistically, there are several key situational and functional skills and experiences that are critical to the success of the asset.



### I. Leading a business of scale

Choice of CEO is often a point of contention as a business goes through a period of significant growth, which is influenced further through the adoption of third party capital. The Indoor Agriculture industry is seen to be shifting from a period of focusing on technology and innovation toward operation at scale. It is imperative that the business maintains its core culture and values, often set by the founding team, however at scale considerations must be taken as to whether the leadership team are the correct individuals to lead a business of scale. An investor must ensure they have a team in place for the business of tomorrow not only today.



## II. Developing unproven commercial strategies

For operations to be scaled effectively there must be a proportionate demand for your product. Large food retail will be a large enabler of this growth. Suzy Monford explains, "The biggest barrier to success at scale is the lack of knowledge and expertise in developing a viable go-to-market strategy around retail. The retail grocery industry is multifaceted and complex to penetrate. Hiring someone who can develop a strategy which both attracts and retains market share is critical. "

The markets expand beyond food retail into the food service industry as well as adjacent industries that may develop as produce becomes more diverse, such as pharmaceuticals and healthcare.

## III. Delivery on time, on budget

High CapEx costs create a high barrier to entry and equally high barrier to success. There is still a degree of unpredictability where it relates to costs and delivery. The leadership team must consist of individuals confident in sourcing strategic locations suitable for these energy intensive assets. They must also be capable of managing complex groups of stakeholders to deliver projects within budget and to a deadline.

The success of the industry at scale will rely on some degree of standardization to reduce costs. This will be driven by both the engineering, procurement and construction (EPC) industry and the leaders within the Indoor Agriculture businesses themselves.

## IV. Operational delivery across a distributed network

As we move from single facility pilot projects to scaled, disparate networks of facilities there will be an increased importance on developing efficient and robust logistical operations to ensure reliability of delivery to customers. As Orion Infrastructure Capital look to the potential of the industry and their current investments, Jason Ghoshhajra comments, "At scale these assets will have facilities in more than one location. Talent that can operate a distributed network across a country or region is key".

## V. Capital markets and complex project finance

Our research of financial executives proves that capital markets and project finance are the dominant skills in our data set. We believe these skill sets will remain key as businesses begin to scale.

- Project finance will remain key as teams continue to develop projects, likely to continue to be bigger and more complex
- M&A will be expected to be a driver of growth in the industry, with many smaller single asset businesses looking for exit strategies to the larger players looking for opportunities to spread regionally whilst solidifying market share
- Fundraising will also continue to be important. We expect PE to continue to play a significant role in the growth of the industry, hence having investor savvy financial leaders will optimize the ability to raise capital in volatile markets, ensuring safety and sources of capital for growth
- Accounting and core operational finance skills should not be ignored and it is important that holistically the team is still able to establish the correct controls, systems and financial structures to enable growth

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## Authors



One Search is a specialist search firm dedicated to the infrastructure and energy transition private markets. Since our inception in 2006, we have evolved with the asset class, positioning ourselves as a global leader in building world class, diverse teams for leading funds and their portfolio companies to deliver significant value creation.

With offices in London, New York and Abu Dhabi, One Search has a rich and global network that ensures we offer real time insights and a bespoke service to all of our clients and candidates.

[www.one-search.com](http://www.one-search.com)



### Tim Walton

Principal, Portfolio Practice

Tim leads our Portfolio Practice in Europe, supporting a diverse set of investors on building robust and effective leadership teams at the executive and non-executive level across their portfolio companies.

Tim began his career with One Search, where his passion for sustainability and decarbonisation was born. After a few years, he took the opportunity to explore life in a leading tier 1 search firm as part of their Global Industrial Practice, where he successfully worked on the appointment of C-level executives across hydrogen, transport, energy technology and advanced manufacturing as well as the build out of several pioneering decarbonisation investment platforms, globally.

Since returning to One Search as a key founding member of the Portfolio Practice, Tim has worked closely with a variety of global infrastructure funds to identify critical C-suite, NED and Operating Partner leadership talent with a primary focus on the energy transition and digital sectors.

Outside of the office, Tim is a keen athlete having represented Great Britain in sailing and water polo during his younger years. Residing in Dublin, Ireland, Tim now spends his time in the Wicklow Mountains on his bike and racing in the Irish National Series.



### Conor Meagher

Senior Associate, Portfolio & Equity Practices

Conor joined One Search in 2022, and works across the Equity and Portfolio practices. A Floridian hailing from Key Biscayne, he now splits his time between his home state and New York City. Prior to joining One Search, Conor spent two years working for retained search firm Charles Aris, recruiting for PE-backed companies across multiple industries.

Conor studied Economics at Wake Forest University in North Carolina where he played rugby and led several philanthropic events and initiatives. While attending Wake Forest, Conor became aware of the detrimental effects of unsustainable farming practices on cities. He discovered that Winston Salem, the location of the university, was among the worst food deserts in the US. This realisation sparked Conor's interest in the advantages of controlled environment farming, specifically their capacity to cultivate locally sourced produce year-round.

Outside of work Conor enjoys playing guitar, wake boarding, and taking advantage of his Irish passport to explore Europe. Conor is a past U.S. national champion rower and continues to enjoy keeping fit. Weekends usually see Conor cheering on his beloved Miami Dolphins or exploring New York City.



### Laura Carl

Associate, Portfolio Practice

Laura joined One Search in January 2023 and supports the Portfolio practice. Prior to joining One Search, Laura spent three years working for expert network firm AlphaSights, connecting growth equity investors with senior executives for consulting, board placements, and longer-term engagements across different industries.

Originally from São Paulo, Brazil, Laura studied International Affairs at the George Washington University in Washington, D.C. She has also previously lived in Miami and New York City, before moving to London in 2022.

Laura is passionate about all things sustainability and has become particularly interested by the Indoor Agriculture space in the past couple of years. The sector's potential to transform our relationship with food and the environment while helping solve issues such as climate change, food security, and land scarcity is something Laura is particularly captivated by, and she hopes to continue exploring the space as the sector develops.

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