The Role of Anchors

lessons from international innovation precincts

Place-Based Innovation Series

September 2022







Acknowledgment of Country

The NSW Innovation and Productivity
Council and Investment NSW acknowledge
the traditional custodians of the land and
pay respects to Elders past and present.
Investment NSW also acknowledges all the
Aboriginal and Torres Strait Islander staff
working within NSW Government at this time.

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About the NSW Innovation and Productivity Council

The NSW Innovation and Productivity Council (IPC) was established by the *Innovation and Productivity Council Act 1996* (the Act). It advises the NSW Government on priorities for innovationled economic development and productivity.

IPC members are leaders from industry, education, and research sectors. Members are appointed for three-year terms, bringing a rich and diverse range of experience and expertise to the work of the IPC.

The current Council was appointed in 2020 and is chaired by Neville Stevens AO, a former Secretary of the Australian Department of Industry and the Australian Department of Communications, Information Technology and the Arts. The NSW Chief Scientist and Engineer, Professor Hugh Durrant-Whyte and the NSW Chief Economist, Stephen Walters are special advisers to the Council.

IPC publications are independent reports and do not constitute NSW Government policy. This is consistent with the role of the Council and its object under the Act.

Further information is available on the Council's website.

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Foreword from IPC Champion

Welcome. I am so glad you are here.

The NSW Innovation and Productivity Council has written this report to share lessons with everyone who is involved in developing our precincts: place leaders, existing and prospective anchor businesses and institutions, precinct participants, and governments at all levels. This report is our way of handing the responsibility to everyone to act, including you.

As the reader, you are on a journey to become a more informed actor in the economy, and I hope you will use this information to develop and drive active, productive innovation precincts.

The manager of the Smart Region Incubator precinct reminded me recently, that 'if it's going to be, it's up to me'. This report shares lessons from international experience as well as experience so far in NSW because we want you to be part of the creation of thriving communities for business people and subject-matter experts. We want you to build spaces that engender confidence and dynamism, and we want them to last.

Two important ways to do that are to:

- 1. Attract and encourage the right anchor businesses and institutions to our precincts
- 2. Once anchors are on board, make sure that we enable long-term successful partnerships.

Now that you're on board, you're probably wondering what an anchor is. True anchors help those around them to grow and flourish. They give people new confidence to invest in skills, in research ventures, in commercialising great ideas, in creating new firms and new supply chains. They keep everything and everyone in an area connected. They provide stability. They inspire confidence. They create the base for firms' growth.

Unfortunately, you cannot build it and expect them to come. Precincts rely on careful planning and there are key ingredients in this report that can help you bring the right people and businesses together in the right ways.

And if they do all come, what then? When I lived in Silicon Valley, I remember a friend saying 'I am surrounded by a sea of people, but I feel so alone'. If you have ever felt isolated in the workplace, been geographically isolated, or suffered isolation while working from home in COVID-19, you may already crave the benefits that come from being in a shared-work or precinct setting. A place where you can talk business with like-minded people, adopt new technology because you rubbed shoulders with the right people, absorb knowledge and enthusiasm while boiling the kettle. (This happens all the time to me at The Exchange in Dubbo.)

I have had the privilege of studying at Stanford University in California and seeing how a great institution creates connections. Stanford has anchored the long Silicon Valley technology boom. With Stanford as their anchor, Google, Sun Microsystems, Cisco and more have grown into giants, and as students, we benefited as their leaders came to campus to lecture us. These leaders were also taught by Stanford's fine thinkers, they employed Stanford students, and were driven by the precinct's hum. Success drives success.

New South Wales is seeing strong anchors emerge, and there is much we can learn from precincts around the world. We don't need to duplicate Silicon Valley's success to profit from its lessons. Other regions have grown anchor institutions, or attracted them in, and some are starting to think like an anchor before investing in the traditional bricks and mortar approach. We are already doing some of this. We can do more.

By pulling together these lessons into a single resource, this report aims to encourage the creation of more anchor businesses and anchor institutions to help build a stronger New South Wales.



Jillian Kilby
NSW Innovation and Productivity Council



Executive summary

Anchor businesses and anchor institutions can be game-changers for a local or regional economy. The right anchors in the right circumstances create many new jobs, encourage suppliers to innovate, attract capital and talent, connect small businesses to global markets, and accelerate investment in R&D, infrastructure, public space, and shared amenities.

Successful locations in NSW and internationally have shown how — with the right choices and careful stewardship — the arrival, relocation, or expansion of anchors within innovation precincts can create many public and private benefits. These benefits accrue across a variety of locations (from CBD fringes to suburban campuses, regional cities to strategically located towns) and industry specialisations, for whom anchors provide the profile, confidence and signal to people and businesses that their chosen precinct is 'where the action is'.

Despite the hugely disruptive effects of COVID-19 on workforce mobility, place requirements remain highly relevant, with anchors still typically very committed to their innovation precincts around the world.

Many anchors increasingly rely on scarce talent and the convergence of capabilities that span science, medicine, data, and technology. These produce more demand for anchors to be in talent-friendly places where they can access custom shared facilities and an available mix of skills.

Innovation precincts remain essential venues where people can access advanced technology and technical infrastructure, as well as being places which support in-person teamwork, decision-making and knowledge transfer.

Intentional, place-conscious anchors are a recent and emerging phenomenon in NSW. Across the state, there is currently a clear appetite among many anchor businesses to use their locational advantages more consciously, build a stronger local talent pipeline and share common infrastructure for the benefit of a wider cluster.

NSW's anchor institutions — especially universities and specialist institutes — are also becoming more aware and more proactive in using their deep roots, global networks and purchasing power. This increased 'precinct consciousness' is resulting in more anchors becoming collaborative custodians of local precincts as these places evolve into more complete and mixed-use environments that are home to cohesive communities of practice.

This report shares lessons from international experience for all those involved in developing our precincts: place leaders, existing and prospective anchor businesses and institutions, precinct participants, and governments at all levels.

The art of anchoring innovation economies

Not every large organisation in a place is an anchor. The idea of 'anchor' is used in many contexts, from retail to infrastructure. But in the innovation economy — where value is created through processes of discovery, enterprise, collaboration, and commercialisation to be an anchor requires more than relying on a dominant physical presence, supplier network or procurement power.

After all, a company or a university may choose a precinct location simply because it wants to access the lifestyle benefits that attract talent, or because it seeks the most efficient transport links and proximity to a stable supply chain. It may, as many do, construct high walls around itself, visible and invisible. And the scale of its commitment to a given location may wane in periods of crisis, disruption, and financial stress, such as a global pandemic.



This means that the search for a prospective anchor is not by itself a strategy for innovation in a place. No anchor by itself is a silver bullet. This fact is especially relevant in NSW, where there is not yet a fully-defined sense among key partners in all priority precincts of who the anchors are, or should be, and what the innovation roles of anchors can entail.

International experience suggests that a successful innovation precinct nearly always relies on one or more anchors being a proactive and pivotal participant in the production of shared knowledge, and a catalyst for varied opportunities and relationships, often near other anchors.

Many reputed anchors may be unable or unwilling to play these functions, because of their commercial pressures, lack of time, privacy concerns, locally competitive rivalries, rapid changes in circumstances, or a perception that demands placed upon them may become onerous. The propensity of any business or institution to behave as an anchor to a precinct must be consistent with its own internal priorities and external networks.

So successful anchoring of an innovation precinct rarely happens by accident. The status and expectations of an anchor cannot simply be demanded or designated from outside. Indeed, many of the promising examples of anchors so far in NSW — from Atlassian to Lockheed Martin, from ANSTO to Macquarie University — have emerged from local leadership and medium-term give-and-take relationships in the existing innovation community.

This means that to enable suitable anchors to succeed, enter and evolve, and avoid disappointment or inflated expectations, careful choices and patient orchestration are required from those who lead, finance and champion a precinct.

Anchors and innovation precincts: from happy accidents to applied principles

Precinct leaders and governments (local, state and federal) who shape precincts need to be informed before they can effectively attract an anchor or work with them. They need to understand the local market needs, the character and make-up of prospective arrivals, and any barriers to commercialisation in their precinct. This includes factors that influence whether an anchor is able and willing to generate benefits for the wider ecosystem: the size of its presence; its balance sheet strength and pace of growth; the focus of its division and staff; its appetite and track record for collaboration; and the incentives and obligations it has to the surrounding community.

There are also established institutions and businesses located in NSW precincts that do not perceive themselves to be anchors or have a strong sense of the opportunities or expectations that come with being an anchor.

These factors mean that there are important roles for governments and place leaders when it comes to selecting, negotiating, and relationship-building with anchors to optimise the opportunities they pose. Many of these roles, including for anchors themselves, are detailed in this report, drawn from interviews and experience across more than 30 innovation precincts of different types and stages, both in NSW and worldwide, spanning cities, suburbs, and smaller hubs.

No two innovation precincts are the same. Yet among the world's most successful and established innovation precincts, there are some common observations about how anchors emerge and evolve within them.

Four precinct principles help anchors thrive

There are four observed principles relevant for the current NSW context that precincts can adopt to help their anchors thrive.



1. Curate the whole precinct

Successful precincts are highly intentional about the whole tenant mix they wish to create, as well as the cultural amenity, inclusive public space and street life that sustains it. One anchor or one relocation decision rarely breaks or makes an innovation precinct.

Successful precincts develop selection criteria to inform the appraisal, attraction, and selection of tenants, large and small—assessing the impacts from prospective anchors on the whole ecosystem, rather than on jobs and investment alone. Usually, this is done through a strategy that considers the whole tenant mix and supporting activities to ensure a high-interaction, strong-relationship environment, developed in collaboration with existing anchors and allies.



2. Build mutually beneficial agreements

Successful innovation precincts commonly create a shared set of objectives that incoming and existing anchors sign up to and help co-create. This often includes performance-based arrangements that strongly incentivise longevity, quality job creation, local procurement, and wider precinct impacts. Successful innovation precincts rarely rely on a single 'managing agent' for anchor deals, or crude tax or land incentives to win business.

Governments can influence the behaviour of anchors through careful design of agreements that avoid inflexible and bureaucratic expectations, which can inadvertently stifle anchors. The precise 'deal' arrangement negotiated is less significant to the success of precincts than the role governments play building positive relationships and helping precincts adjust quickly to changing land use needs, skills, brand, specialisation, technology, community, and networking.



3. Create shared precinct identity and purpose

A precinct's 'anchors strategy' is positively influenced by leaders and decision-makers whose primary interests are on maximising returns, commercialisation (enterprise and exports), and place-based (long-term physical and social improvements).

Precincts with conflicting motivations are often unable to agree on which anchors to attract and when. Effective governance and coordination are crucial to making the most of anchors. Building a spirit of common endeavour creates a more resilient local ecosystem that over time delivers more jobs, value, and scalable businesses.



4. Contain expectations and focus on lasting relationships

Anchor businesses in fast-moving industries make specific and important contributions to economic development and rely on commercial flexibility. Successful precinct leadership focuses on building lasting, long-term relationships within the precinct, which over time will benefit the culture and outcomes of the precinct.

Optimising the contribution of new anchors is most effective by creating the environment for rapid research and development (R&D) collaborations and ensuring inclusive enterprise and procurement rules.

Where metrics have been used, these are co-designed by both parties and the reciprocal benefits clearly thought through by precinct leadership.

Opportunities for NSW

These lessons from international experience inform NSW Government's support of innovation precincts to ensure strategic and patient interventions enable anchors to flourish and spark improved NSW-wide innovation outcomes.

They indicate the value of proactively enabling and resourcing a genuinely partnership-led environment — to foster precincts with governance appropriate to the context, to provide seed investment in spaces for anchor expertise to convene, and to devote capacity to the task of mapping, building and guiding networks where anchors can make a difference.

Most innovation precincts in NSW are at the early stage of development, strategy, and collaboration. Anchors are only an emerging part of their story. Many precincts will benefit from clear and well diffused principles about the desired mix and character of incoming anchor businesses to preserve their authentic specialisation. Others will rely on their anchor institutions being supported by stronger and more inclusive governance arrangements, well-sequenced physical transformation, and investment to orchestrate the ecosystem.

All of them will rely on a wider innovation strategy and brand-building exercise that raises the confidence and incentives for the anchors and incomers of today to become tomorrow's drivers of jobs and innovation.

To help NSW innovation precincts and anchors succeed, the IPC makes four overarching recommendations to NSW Government which are discussed in detail in Chapter 6 *Opportunities for NSW*. These recommendations are designed to incentivise and enable NSW anchors to shift from primarily being users of the precinct to becoming more active participants and champions of the precinct.

IPC recommendations for NSW Government

Goals and delivery shaped together with anchors and partners



to help shape the long-term success of precincts.





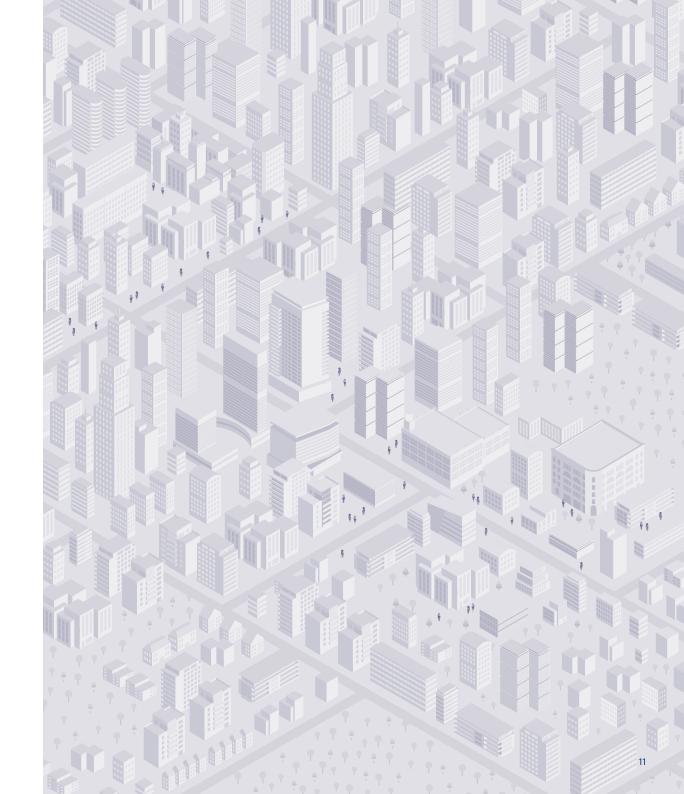
Introducing the IPC's Place-Based Innovations Series

Concentrated place-based innovation activity is an important part of the economy, helping to attract talent, and building on the opportunities of their location and sectors.

The NSW Government is actively investing and supporting innovation precincts through Investment NSW, the Greater Cities Commission, and government-wide initiatives such as the Greater Sydney and Central Coast Precincts Strategy and Special Activation Precincts.

To inform NSW Government's investment in precincts and place-based innovations, the IPC is delivering a Place-Based Innovation Series providing targeted evidence-based reports on key topics of interest to NSW Government. This report is the first in this series. It explores the important role anchor tenants play in the success of precincts globally to enhance existing anchor-precinct relationships in NSW and inform attraction strategies for new anchor tenants.

This work builds on the IPC's report NSW Innovation Precincts: Lessons from International Experience, which explores the factors that contribute to successful innovation precincts, as well as the common risks and failures. It examines international literature and case studies from the viewpoint of New South Wales to better understand why some innovation precincts are more successful than others and to identify the different roles that stakeholders and governments at all levels can play.



The NSW Innovation Precincts report found that in New South Wales, government (whether it be local, state or federal) predominantly drives precinct development, compared to most international precincts that emerge organically because of market forces and strong competitive advantage, with only a small number growing from government investment or programs.

The future NSW economy will be increasingly concentrated in technology-enabled industries, such as fintech, medtech, agritech and cybersecurityⁱ that benefit from place-based clustering as they need a unique set of assets and skills.ⁱⁱ

To be a technology leader, we need to tap into overseas talent, deliberately targeting talent in the state's most competitive industries, including Australians living overseas, who bring with them more developed skills and connections to global sources of knowledge, commonly referred to as 'brain circulation'. This is discussed in detail in the IPC's recent report, *Global Talent Wars: Learning from locations that attract the best.*

1.1 Innovation precincts

An innovation precinct is distinguished from other innovation locations by the intensity and scale of its on-site collaboration, productivity and positioning in the global market, and the brand visibility it gives its economic activities. They create market visibility and identity for industry and research clusters and build on the opportunities and characteristics of their location. They attract skilled workers and provide the spaces and infrastructure that suit the various participants — anchor tenants, businesses, research organisations, investors, entrepreneurs, incubators, and accelerators.

Institutions such as universities, research-intensive hospitals and defence facilities are often the precinct catalyst. There are, however, successful precincts without universities, and many locations with universities that are not precincts.

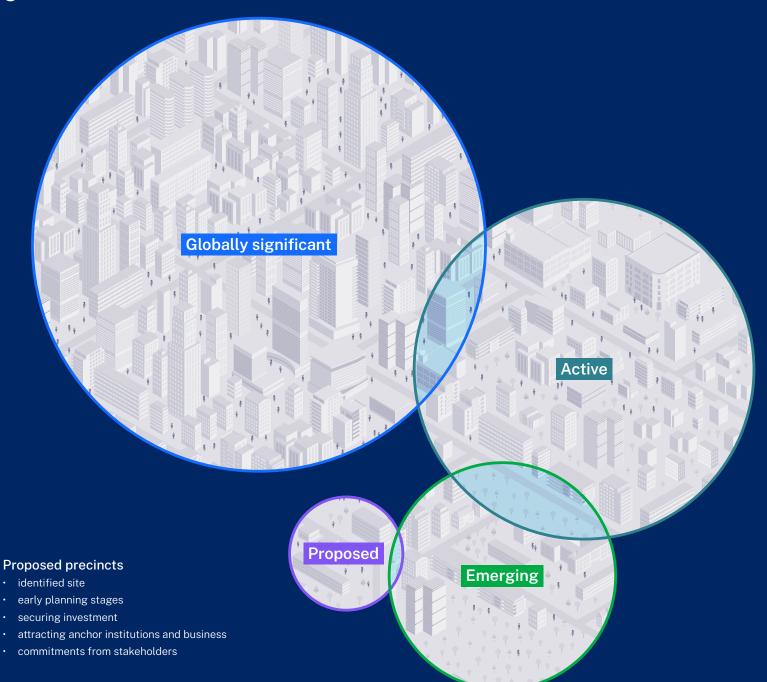
Innovation precincts vary in size, scale, and development. Their maturity pathway is not always linear, and they develop, grow, and change in various ways and at different rates. Most large, economically successful cities will have several types of innovation precincts at different stages of development and maturity.

The IPC coined the terms 'proposed', 'emerging', 'active' and 'globally significant' precincts to describe this maturity. Globally, significant innovation precincts take years to develop, and strong market drivers are critical to their success.



ii Modelling by the Market and Analysis Branch in Investment NSW.





Globally significant precincts

- significant economic contribution
- · sophisticated infrastructure
- substantial investments from diverse sources
- · large number of jobs and firms hosted
- established governance and active leadership
- strong culture of collaboration and international partnerships
- respected international brand and reputation
- significant commercialisation of R&D
- attract and retain talented workers and businesses
- sustained international market presence

Active precincts

- · increasing its scale and reach
- good enabling infrastructure
- · accessing venture capital investment
- attracting new partnerships
- formalised governance structure
- culture of collaboration and entrepreneurialism
- strengthening brand and identity
- · commercialisation of R&D
- vibrant location attracts workers and visitors
- tapping into global markets

Emerging precincts

- starting to scale up
- · improving amenities and infrastructure
- increasing investment
- diversifying participants
- forming appropriate governance
- undertaking collaborative ventures
- establishing identity and brand

1.2 Seven factors for successful innovation precincts

The IPC's NSW Innovation Precincts report found innovation precincts need seven 'ingredients' to be successful. Anchor tenants can play an important role in each of these seven aspects:



1 Market drivers

There is: strong market demand for the goods or services; competitive pressure in the sector to innovate; access to markets, skills and investors; reliability of the jurisdictional legal and intellectual property (IP) protections and the competitive regulatory environment needed for a well-functioning innovation economy.



2 Competitive advantage

A clearly defined market advantage or sector specialisation is communicated through strong branding to attract and retain talented workers and financial investment, supported by proproductivity regulatory settings.



3 Collaboration

Facilities and programs support collaboration between diverse organisations — from spaces for informal social 'collisions' through to commercial frameworks for joint ventures.



4 Infrastructure

Physical, transport and digital infrastructure supports research, innovation activity and business connectivity within and outside of the precinct.



5 Amenity

A vibrant and liveable location attracts people to work, play and live there. It offers a sense of place for participants in the innovation ecosystem and for the workers who provide ancillary services to the precinct. It is underpinned by flexible and adaptive land use planning regulations and the provision of well-designed local cultural infrastructure.



6 Enterprise culture

An entrepreneurial culture supports risk-taking, collaboration and sharing ideas. This culture is supported by mentoring programs and a diversity of organisations and workers, and is influenced by the culture of the anchor institution.



7 Leadership

The precinct has robust governance, strong leadership, political commitment and a shared vision.

1.3 Common precinct pitfalls

Precincts are made up of a complex mix of stakeholders, economic drivers, and local factors that make them particularly vulnerable to market failures. Importantly, a precinct will probably struggle if it is primarily established because of political will and has little or no market demand.

International experience suggests several barriers to a precinct's success. Understanding these barriers can help to create successful and sustainable anchors:

Weak market demand

Precincts may not have the factors needed for them to be economically viable, or there may be little evidence of new economic activity or innovation from businesses locating there. There are also risks when precincts are established primarily because of political will rather than market demand.

Barriers to investment and commercialisation

Factors that impact the investment in and commercialisation of research and development (R&D) will slow innovation activity and precinct success. These factors can include restrictive intellectual property controls, a closed academic culture and a tendency for industry to under-invest in research.

Lack of entrepreneurial culture

The precinct may not provide quality incubator and accelerator programs or other support needed for precinct participants to interact collaboratively with startups and smaller firms.

Poor access to capital

Firms in startup and growth phases may not be able to access enough capital from angel and venture capital investors, standard investment groups or public funding.

Poor access to skills

Local skills shortages can hinder the capacity of the precinct to innovate and scale. Precincts rely on proactive development and diversification of the talent pool.

Poor placemaking and connectivity

Insufficient amenity, inadequate public transport and poor tenant infrastructure will reduce the attractiveness of the precinct to employers, workers and startups. Precincts should anticipate future space growth for scale up firms, and not only service the needs of much larger or smaller players. An under-developed cultural offering also reduces the gravitational pull of the precinct.

Restrictive regulation and a lack of policy support and coordination

Policies and long-term funding decisions of stakeholders may not support the new technologies, emerging business models and changing demand for skills that are central to successful precincts. Planning regulations can create financial or bureaucratic impediments to zoning land to support mixed uses, while poor IP regulations can restrict knowledge sharing and have a negative impact on innovation activity in the economy.

1.4 The focus of this report

We understand the benefits anchors can bring to a place. Less understood is their experiences in successful innovation precincts. This report explores these experiences in more detail to learn how to integrate anchors more successfully within the broader ecosystem community, and thus make the most the most of their skills and expertise in NSW.

There is limited research on what it takes for an anchor to successfully catalyse economic growth in a precinct, and how governments and real estate developers can effectively negotiate and partner with anchors to optimise their value. This is partly because anchors have only recently become 'precinct conscious' and precincts (and their leaders or government sponsors) have only recently become 'anchor conscious'.

This report draws directly on the experience of more than 30 internationally prominent innovation precincts, as well as wider experience of more than 30 others (Appendix 1), to identify:

- 1. What can an anchor bring to a place? What are the impacts from having a committed anchor or group of anchors in place?
- 2. How have precincts best leveraged anchors' skills and expertise for the benefit of the precinct and wider community?
- 3. What role can governments play in attracting, incentivising, and enabling anchor tenants to support innovation precinct outcomes?

Figure 1 identifies the precinct locations for the anchor tenants interviewed for this report. These precincts were selected because:

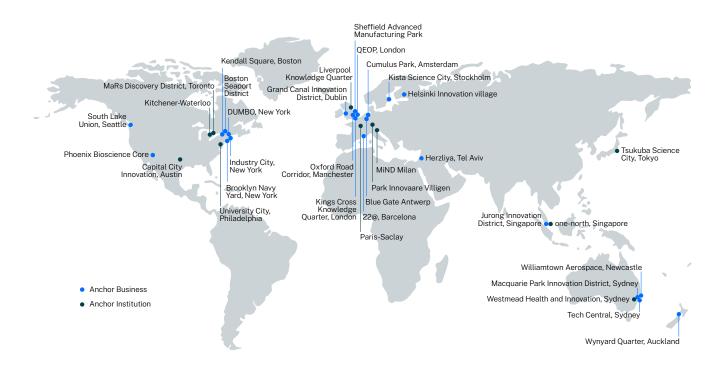
- they are among the most established precincts worldwide, or they are the leading example of an innovation precinct in their region/nation (e.g., Auckland, Dublin)
- an anchor or group of anchors is recognised as having played a distinct role in the development of the location and/or city's wider economic success.

Anchors from four precincts in NSW were also interviewed to understand the current state of play.

The analysis is based on a range of insights from key international precincts as well as precincts in NSW, from published reports, and from interviews with precinct representatives and anchor leaders themselves. Care has been taken to consider self-assessments by individual precincts in context to ensure consistency with the broader evidence provided. It is also important to consider the local context in assessing whether an approach adopted in one location can usefully inform policy and strategy in another.

The list of individuals interviewed is at the end of the report. Many are quoted through the course of the paper.

Figure 1: Locations of the precincts where anchor tenants were interviewed







What do we mean by anchors?

Anchors (such as larger firms or universities or hospitals) are important economic and networking assets in an innovation economy. They can have positive impacts on the places in which they are located, supporting economic, community and placemaking outcomes.

Governments are discovering the important role anchors can play in providing jobs, investing in R&D, promoting commercialisation, creating spin-outs, attracting capital, and supporting supply chains.

Anchors have broader connections to the workforce and community and can facilitate skill transfer to other firms. And they have the reach and influence to champion a precinct or cluster to improve its international profile. These anchors are important to the success of many innovation precincts and have given rise to the so-called 'anchor plus' precinct model.

In successful cases the presence and commitment of an anchor lends stability and strength to the economic development of the place. Amazon's move to South Lake Union precinct in the United States is one high-profile example of how a fast-growing and well-connected anchor can attract additional businesses and people to cluster around it. Others include Tencent in Shenzhen's Nanshan precinct, the BBC in Manchester's MediaCity, and Karolinska Teaching Hospital in Stockholm.





For locations experiencing industry shocks or long-term economic change, anchors provide support to strengthen industry resilience or help facilitate the economic transition. Anchors can also have a catalytic impact in regional areas, creating new supply chains and triggering new investment, including from businesses looking to co-locate. Anchors also help develop cohesive communities in lower-profile and suburban places by providing credibility and knowledge and enabling spin-off enterprises. And in a global context where COVID-19 is disrupting and dispersing the places and ways in which innovation happens,² anchors provide a centre of gravity and an essential source of community and common purpose.

Importantly, anchors have a wide range of appetites and remits for innovation, and these influence their capacity to collaborate and invest in a place's growth potential. As the IPC found in its report NSW Innovation Precincts: Lessons from International Experience, the local innovation impact of a tech giant depends on their role in the larger corporation — whether they are a sizeable product development team or just the local sales division.

"We love being next to Amazon. They are to South Lake Union and Seattle what Microsoft was to Redmond and the Eastside in the 1990s. They attract a lot of talent. Talent begets talent."

Bryan Trussel

Glympse Chief Executive Officer

What do we mean by anchors?



Anchors provide connections and stability.

In economic development, 'anchors' are innovative businesses and institutions that are important enough to do for local economies what engineering anchors do for suspension bridges. They keep everything in an area connected. They provide stability. They inspire confidence.

Effective anchors work the same way for an economy: they develop strong connections so people can learn fast from each other and stimulate further investment. The prospect of fast learning encourages many businesses to come to the same place. In this way, anchors can drive the development of thriving innovation precincts.



2.1 Not all anchors are the same

Anchors come in many shapes and sizes, although they are frequently grouped into either 'anchor companies' or 'anchor institutions' (see Box 1). Both can play a critical and catalytic role in their locality. Yet their inclination to describe themselves or perceive themselves as anchors, and to seek to be part of an innovation precinct, and support its growth and development, may vary considerably.

Anchors' roles can vary depending on the sector, type of location, and the maturity of the precinct. This variation is also influenced by the length of time they have been associated with a precinct or city, the size and pace of organisational change, their track record of collaboration, and many specific factors of leadership, incentives, and external circumstances.

Of course, all anchors, whether educational or commercial, have their own core organisational missions, and the people who lead and work in them have their own day-to-day relationships and responsibilities, locally and globally. Not all can be expected to develop additional roles and responsibilities for a place, or to build relationships with neighbours outside of their immediate orbit.

Understanding the differences between the types of anchors and how to optimise their relationship and commitment to a wider precinct, is a core focus of this report.

For the purposes of this report,4 anchors are defined as:

- companies that grow up, relocate to, or establish a niche presence within an innovation precinct — including domestic and global companies
- knowledge-rich institutions such as universities, hospitals, public research institutes, government agencies, cultural bodies, theatres, and museums.

Box 1

Definitions of anchor companies and anchor institutions



Anchor company

An anchor company or tenant is an idea that has its origin in retail. It refers to a larger company that has the scale and prestige to draw in customers and encourage other businesses to move into an area.

Places often target anchor tenants because of their financial resilience, long-term vision, and good fit with the target customer.

Landowners or developers also select anchors to help shape the character and feel of an area, often via a lease agreement that covers rent, expenses, and up-front space costs.

As applied to innovation precincts, anchor tenants are those that, whether intentionally or unexpectedly, continually foster diverse connections among those located nearby.



Anchor institution

An anchor institution is a more recent idea that emerged to describe the galvanising role that an established university plays in a neighbourhood experiencing economic (often post-industrial) change.

It also refers to teaching hospitals, important cultural amenities, and other organisations that employ large numbers of people, have significant procurement spend, and have strong ties with their local surroundings.

Such institutions are sometimes 'tenants' but quite often own significant land holdings in a precinct or have a mix of leased and owned properties.

Their size and mission mean they frequently advance projects and infrastructure and deliver services that supply a wider community.

2.1 Not all anchors are the same (continued)

Anchor companies typically denote private firms, while anchor institutions usually have some public or civic mission. There are important differences between these types of anchors, including their core purpose and responsibilities, their potential to be mobile, their customers and brand audiences, and the rate and timeframes of growth they experience. Within both companies and institutions, there are also distinctions relating to the scale and mission of the organisation (see Table 1).

Over time, however, the divide between these anchor types has blurred as they developed common elements in the way they behave and succeed — providing more opportunities to create shared value for businesses and institutions. In this report we explore the roles of both, mindful throughout of the essential distinctions between them.

Anchors of all types commonly share the following traits in innovation precincts:

- Engagement in R&D and at least some ability to connect to and learn from international networks of knowledge and innovation (a trait sometimes known as 'absorptive capacity').⁵
- Some aspiration or requirement to co-locate with other knowledge-rich organisations and activities.
- The desire to create business opportunities and human and social capital advantages that serve both the precinct and, over the long run, their city and region.⁶

In this report the term 'anchor' refers to both anchor institutions and anchor businesses. Where one type is specified, the full term is used.

All innovation precincts are unique and the role that anchors play within them is constantly evolving. One of the key findings of this research is that any approach to selecting or working with anchors must be responsive to local circumstances. To reflect this variety, we make distinctions where primary sector orientation is relevant, as well as the precinct stage of maturity.





Table 1: Ten types of anchors

Anchor business	Good examples	NSW examples
Fast-growing talent-hungry anchor company	Vertex Boston Seaport District Amazon South Lake Union, Seattle Shopify Canadian cities	Atlassian Tech Central
National/regional HQ of a stable global business	IBM Wynyard Quarter, Auckland Takeda Shonan Health Innovation Park, Greater Tokyo	Konika Minolta Macquarie Park Precinct
Innovation arm of a disrupted/forward-thinking incumbent	Boeing Sheffield Advanced Manufacturing Park Telefonica 22@ Barcelona GE Healthcare Helsinki Innovation Village	NEC Tech Central
Global firm accessing a location's specific infrastructure or market/regulatory advantage	Ineos Blue Gate Antwerp Google Grand Canal Innovation District, Dublin Hyundai Jurong Innovation District	Lockheed Martin Williamtown Aerospace Precinct, Newcastle
Young niche firm with modest scale and high collaboration requirement	BT Sport Queen Elizabeth Olympic Park, London Tgen Phoenix Bioscience Core Steiner Studios Brooklyn Navy Yard	Post Op Group Eveleigh/Tech Central

Anchor institution	Good examples	NSW examples
Large established university	University of Toronto MaRS University of Manchester Oxford Road Corridor	Macquarie University Macquarie Park Precinct The University of Sydney and RPAH, and University of Technology Sydney Tech Central
Large infrastructure facility	Paul Scherrer Institute Villigen, Switzerland Port of Rotterdam Rotterdam Makers District	Advanced Manufacturing Research Facility Bradfield City Centre
Specialist institute	Human Technopole MiND, Milan A*STAR one-north, Singapore) Reichman University IDC Herzliya, Tel Aviv	Children's Medical Research Institute Westmead Innovation Precinct
Major local/national service provider	Central Health Capital City Innovation, Austin BBC MediaCity, Manchester	TAFE NSW Liverpool Innovation Precinct
Governance body or network	Royal College of Physicians Liverpool Knowledge Quarter	NSW Space Research Network Camperdown-Ultimo Alliance Tech Central

2.2 Precincts and anchors in NSW

A broad range of place-based innovation activity is occurring across NSW in sectors including healthcare, financial and business services, biopharmaceuticals, defence, agtech and creative industries. These innovation locations span different scales with a small number developing into innovation precincts where research and business collaborations are attracting capital and fostering further innovation.

While the explicit idea of institutions and businesses 'anchoring' a certain place or precinct is relatively new in NSW, there are several important examples of anchor roles being fulfilled, and efforts to integrate universities with nearby hospitals and companies have existed for some time.

At the most general level, there are three broad groups of precincts in NSW where current and future anchors play an important role:⁷

- 1. NSW innovation precincts around knowledge-rich anchors, such as a university or research hospital
- NSW innovation precincts around major infrastructure assets, such as rail gateways, new or upgraded airports, ports, and new city centres, and
- 3. NSW innovation precincts of large firms.

2.2.1 NSW innovation precincts around knowledge-rich anchors, such as a university or research hospital

The first group is home nearly exclusively to knowledge-rich anchors such as universities, hospitals, service providers and specialist institutes. Over the past 10 years, and especially in the last three, NSW has become more intentional about its precinct strategy. These places have benefited from efforts to connect the research and clinical organisations, engage with vocational training providers, and develop partnerships with industry around workforce development.

Many existing NSW institutions are starting to develop partnerships to improve and amplify their expertise, particularly in locations where there is limited opportunity to develop land or relocate assets into the area. This has seen larger anchors in these precincts partnering with startup operators and investing in innovation infrastructure such as incubators, accelerators, and networking communities.

While these are positive signs, NSW anchor institutions still tend to be strongly focused on delivering their core services, with fewer opportunities to collaborate. This is partly because of financial constraints. These affect NSW anchors' ability to contribute the lion's share of time, money, and physical space to the local innovation environment, compared to international counterparts.

To address this shortage, an important priority is the attraction of more corporates nearby—especially those who provide capabilities and intellectual contributions that do not already exist, and who are willing to use shared facilities.

Examples include John Hunter Health and Innovation Precinct, Randwick Health and Innovation Precinct, and Westmead Health and Innovation Precinct.





2.2.2 NSW innovation precincts around major infrastructure assets

A second group of precincts sees anchors starting to cluster around major infrastructure assets, such as rail gateways, new or upgraded airports, ports, and new city centres. These precincts span prime inner-city locations, inland logistics crossroads, and designated greenfield areas.

These locations provide significant benefits including improved connectivity, visibility, test space and first mover advantage. These can also provide customised floorplates for talent-hungry or land-hungry sectors. They represent opportunities to crowd in leading public and private anchors and define a whole place proposition that creates market confidence.

The long-term character of redevelopment invites important choices about how to:

- curate the right mix of incoming anchors
- ensure the amenity and infrastructure provision is consistently conducive to innovation
- sustain a clear brand identity for the location
- create win-win relationships between academia and business.

Examples include Bradfield City Centre, Parkes Special Activation Precinct, and Williamtown Aerospace Precinct.

Tech Central is another example, noting the precinct area also has several knowledge-rich anchors including several universities, a teaching hospital, and medical (and other) research institutes.

2.2.3 NSW innovation precincts of large firms

A third kind of precinct has accrued a sizeable group of larger firms, typically national or regional headquarters of international companies that tend to focus on sales and market development more than R&D.

These locations have been successful from a business attraction perspective, because they offer convenience, affordability, and access to a large customer base.

While most businesses in these locations do not see themselves as drivers of wider partnership activity, many are "willing accomplices" to initiatives led by universities or government. Many welcome improvements to the precinct's urban amenity and evening economy as they seek to attract staff to technology roles that tend to have strong preferences for their urban environment.

The opportunity here is to foster a self-sustaining ecosystem of startups, growth companies, experienced mentors, and risk capital suppliers, with existing business anchors playing a key role in both the place governance and the provision of innovation space.

The main current example of this precinct type is Macquarie Park Innovation District.



2.2.4 Anchor and government roles change with precinct maturity

Across all kinds of early-stage and more mature precincts, there are signs of positive anchor practice in pursuit of discovery, commercialisation, investment and improved placemaking in NSW. Relationships between larger businesses (and where they are co-located, universities) are largely cordial — with many focusing on building the precinct's profile or aligning curricula with workforce needs.

There are some notable examples of anchor businesses working collectively. The CPMID governance collaboration in **Macquarie Park** is one example, where support for the Venture Café's networking approach also flourished among firms whose company culture aligned with the ethos of the Café.

Another is the Camperdown-Ultimo Collaboration Alliance that was established to coordinate collaborative projects and contribute to the development of Tech Central.

Anchors also participate in the networking and information sharing that has emerged between the local health districts of Randwick, Camperdown, Darlinghurst, and John Hunter.

These coordinated efforts, however, are undertaken in the context that most innovation precincts in NSW are still emerging, with only a small number transitioning to more active and mature stages. As a result, most NSW anchor businesses and anchor institutions consulted for this report are broadly observed to be demonstrating the practices of the first and second cycles, summarized in Table 2.

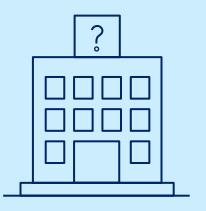
The challenge is to incentivise and enable more anchors to shift from primarily being users of the precinct to becoming more active participants and champions of the precinct. This shift needs the wider and longer-lasting collaborative practices which are observed in more active and globally significant precincts.



Table 2: Current practices in NSW at different phases of precinct maturity

	Emerging precinct	Transition to active precinct	Active precinct
Anchor institutions	 Initiate joint research projects. Deliver industry partnerships to serve training programs. Initiate partnership with a startup operator. Set up joint communities of practice. Develop collective statement of intent for future anchor arrivals. Establish its reputation as a valued provider of talent and business. 	 Relocate functions (in or out) for more strategic purposes and partnerships. Develop strategic approach to master planning and land development. Start to categorise and prioritise prospective partners. Learn how to market and position for industry, not just for research and innovation. Remove remaining institutional barriers to collaboration. Avoid leadership domination by one or more institutions. 	 Develop long-term vision and influence via broad-based governance. Work with industry across all faculties not just one. Develop multiple channels to access industry. Deliver dedicated and resourced focus on place amenity, placemaking, activation. Provide relief for faculties to work commercially. Deliver prizes and hiring decisions informed by commercialisation potential.
Anchor businesses	 Request knowledge institutions to produce skills and talent. Advise on curricula and sit on student panels. Participate in precinct governance and roundtables, mainly for advocacy purposes. Map core capabilities and level of integration across leading strengths. 	 Consolidate capabilities into precinct, often 'under one roof'. Build supply chain relationships in local niches. Sponsor chairs and lectureships. Support experienced talent to move to new and growing companies nearby. Become more interested in the urban amenity and liveability to compete more effectively for staff. 	 Welcome and attract more R&D-intensive businesses. Actively contribute to precinct governance and advocate for wider improvements to ensure long-term precinct competitiveness. Explore roles in other regional locations.
Precinct leadership, including government	Establish anchors' strengths and build cordial relationships of mutual awareness.	 Contribute proactively to tenant curation and selection. Encourage knowledge anchors to focus more on core technology. Build serious corporate involvement. Develop and share stories of new companies, products and capital raising Explore networks of precincts. 	 Actively fill the anchor industry gaps to ensure full spread of capabilities. Deliver adequate startup space to encourage cross-pollination between anchors and SMEs. Trial tech within precinct space — e.g. to minimise urban heat islands. Support anchors to drive innovation more broadly, not just in a single place.

3



Why anchors matter

Anchors have the size, profile and, in some cases, the stable revenue and budget to shape demand and help the long-term economic sustainability of an innovation precinct.⁸ For innovation precincts the collaboration and commercialisation benefits of anchors are key. They also help to attract talent, support local job opportunities, develop a wider skills base, and engage local communities.

This is important for NSW locations where the pattern of the urban form is being established (e.g., the Western Sydney Aerotropolis), or where brownfield redevelopment or urban reanimation is taking place (e.g., Newcastle City Centre). Here anchors can set the tone and create wider place benefits.



3 Why anchors matter

Recognising the different kinds of value anchors can bring, governments are increasingly exploring opportunities to work with and leverage anchors to develop and grow their precincts. The common advantages anchors provide are:



 Scale and global market reach, exposing local clusters to global value chains, providing demand for new products, and helping suppliers accrue technology, global contacts, and skills, increasing competition and fostering the growth of new or expanding industries.



2. Appeal and identity, including building a precinct brand to raise collective profile and visibility.



3. Talent attraction and development, including participating in upskilling initiatives.



4. Fostering knowledge and relationships across the precinct, including R&D with smaller firms, and incentivising them to innovate, mentorship and networking, forging shared agendas, and participating in precinct governance and leadership.



5. Strengthening industry resilience in times of economic transition.



6. Investing in development and infrastructure, including shared assets and services, land for development that supports the precinct's vision, and providing the catalyst for public or private investment.



7. Wider social, inclusiveness and lifestyle benefits, including amenities and infrastructure for local communities, using procurement to benefit local businesses, diversifying workforce opportunities, and civic participation.

3.1 Scale and global market reach

An anchor's commitment often provides the critical mass necessary to build the office, lab space and required infrastructure at a precinct. This also applies to more established locations where redevelopment is required — Atlassian's role in galvanising the public and private commitment to transform the area around Central Station in Tech Central is one example.

An anchor's size can also safeguard many jobs, generate predictable spend on local services, connect buyers to suppliers, and help others spot the obstacles or opportunities that arise through an anchor's global activity. Anchor businesses stimulate demand for innovative products from local businesses, and may even set problems for local suppliers to solve, in effect pulling innovations from the market.⁹

Even when its workforce presence is not large to start with, a company with a strong global position in a sector under pressure to innovate that makes a long-term collaborative commitment in a precinct can expose a local cluster to global value chains and help it accrue the technology, global contacts, and skills to compete over time (see Box 2).

These effects are also confidence-building and identity-building. Anchors create conviction locally among other players in the precinct, as well as enhancing the international brand and perception of the place.

"It is about the scale and confidence they bring — they raise expectations, they give shape to a dream."

Emma Frost

Director of Innovation at London Legacy Development Corporation and Chair of UK Innovation Districts Group



Box 2



Boeing — building up the proficiency and profile of precinct suppliers

Over 20 years **Boeing**, the world's largest aerospace company, has used its dominant influence in the supply chain to help Sheffield's Advanced Manufacturing Precinct grow from a single research centre into a large precinct serving the global market.

After being attracted by the breakthrough of University of Sheffield researchers in reducing gear machining times by 95 per cent, Boeing became the founding co-partner of a research centre that became an anchor tenant of the precinct. It helped to set up a membership model using cutting-edge machines donated by supplier companies.¹⁰

The partnership enabled a UK company¹¹ to win a Boeing 787 contract estimated at £2 billion (AU\$3.5b). In the precinct itself this led to a much-expanded range of machine research, and more skills across the whole aerospace value chain being assembled in the precinct.

Boeing's global brand helped attract other manufacturers to co-locate, including Rolls-Royce and McLaren. Boeing also supported the cluster to set up university, government, and business partnerships in countries across the Asia-Pacific and North America.

Fifteen years later it added to its R&D presence by choosing the Sheffield precinct as its first ever manufacturing facility in Europe. Since then, Boeing's own shop floor workforce has been entirely drawn from apprentices trained in the precinct.

3 Why anchors matter





Box 3

Hyundai — large-scale production facilities push innovation in electric vehicles

Hyundai aims to become the third-highest-selling maker of electric vehicles (EVs) within five years. 12 To achieve this ambition, Hyundai established large scale, highly automated facilities in Singapore's Jurong Innovation District to build EVs. It brought in leading R&D experts from innovation hubs and artificial intelligence (AI) research centres around the world.

Hyundai was attracted by Singapore's track record in innovative technologies, access to capital and network of specialised research institutes, and Jurong's pedestrianfriendly manufacturing campus and on-site training academy.

Working closely with firms already in the precinct like Bosch and Siemens, Hyundai set up a partnership with another anchor, Nanyang Technological University, to conduct joint projects and create an open innovation lab that allows customers to tailor their cars to their liking¹³.

3.1.1 Large production facilities attract other firms

Anchors with global reach also play important roles in encouraging ideas and discoveries to be commercialised by connecting closely with a precinct's knowledge networks. In several industries, the presence of a large anchor production facility creates a 'halo effect', acting as a magnet for other firms to access leading-edge knowledge and tap into commercial business networks (see Box 3).¹⁴

3.1.2 Anchors' specialisation and commercial advantage spur jobs and spin-outs

Anchors with a clear specialisation and commercial advantage can act as a magnet for other businesses, who are attracted to their unique infrastructure and capabilities. This proximity to major infrastructure and supply chains can be a long-term catalyst, growing a larger pool of people with specialised skills in the precinct. This fosters the growth of new or expanding industries, and gradually more capable and confident entrepreneurs and spin-offs.

TGen and its partnership with the Bioscience Core in Phoenix specialising in bioscience has been the catalyst for jobs and startups in the precinct, generating more than US\$1bn of economic impact annually and adding more than 7,000 jobs within the first eight years (see Box 4).15 Similarly, the development of an innovation precinct around the unique infrastructure at Australian Nuclear Science and Technology Organisation (ANSTO) in Sydney (see Box 5) has seen a broad range of organisations cluster and benefit from its specialisation and commercial advantage.

Box 4



TGen — the catalyst for jobs and spin-outs in the Phoenix Bioscience Core

Phoenix's city-owned Bioscience Core (PBC) has unexpectedly emerged into one of the top life science clusters in the US over a 15-year period.

In its planning stage, it pitched to the Translational Genomics Research Institute (TGen) to move into the district. The anchor's subsequent acceptance and the city's investment of US\$58m into a new 170,000 sq. ft building provided the catalyst for Arizona's three public universities (Arizona State University, Northern Arizona University and University of Arizona) and the National Institute of Diabetes and Digestive Kidney Disorders to join.¹⁶

Earlier in the decade, the City of Phoenix invested millions of dollars to acquire several historic buildings as part of the creation of the PBC. It used its Capital Improvement Program to partially renovate these buildings, which attracted the University of Arizona. The university's initial investment of US\$30m brought an expansion of its nationally recognised medical school to the campus in 2007; its investment now exceeds US\$300m.

This snowball effect attracted startups and students and was enhanced by convening events such as Arizona Bioscience Week and TGen's Bioscience Leadership Academy, a fortnight-long bioscience program for 20 high school students. Larger tenants on the campus shared infrastructure, including University of Arizona and Arizona State University's US\$30m joint computational and informatics labs and wet labs.¹⁷

TGen continues to play a key role in growing knowledge-based jobs. It has successfully spun out more than 25 bioscience companies.¹⁸ The TGen Foundation is a not-for-profit organisation designed to secure private sector support for TGen's biomedical research. It also hosts regular stakeholder events, works with educational institutions, and provides students with paid internships. These internships help prepare the next generation of bioscience researchers and doctors via the Helios Scholars program, enabling TGen scientists to share research expertise and technical skills. With a Bioscience High School on the campus, students benefit from excellent access to researchers and internships with TGen and others.

Within the first eight years, the campus had begun to generate more than US\$1bn of economic impact annually, adding more than 7,000 jobs, and these impacts have continued to grow as the precinct has become globally significant.¹⁹







Australian Nuclear Science and Technology Organisation (ANSTO), Lucas Heights

ANSTO Innovation Precinct in the south-western Sydney suburb of Lucas Heights is an example of a knowledge-rich anchor attracting innovative businesses that want to take advantage of the significant research infrastructure, talent, and value chains in an advanced technology industry — nuclear. The facility is centred around ANSTO's significant science and landmark research infrastructure, most notably the Open Pool Australian Lightwater (OPAL) multipurpose reactor. This is Australia's sole nuclear reactor and produces more than 80 per cent of Australia's nuclear medicine.²⁰

ANSTO has been an anchor at Lucas Heights since 1987 when it was known as the Lucas Heights Science and Technology Campus. Since the OPAL reactor opened in 2007, ANSTO has grown the facility through the proactive development of knowledge and relationships across the precinct and through international partnerships that have elevated its global market reach. International businesses have relocated their manufacturing facilities, drawn by the convening power of ANSTO's unique research infrastructure, and the convergence of more than 10,000 international scientists and innovators annually.

The recent relocation of German company OncoBeta GmbH to the precinct for the manufacture and distribution of OncoBeta's new treatment for non-melanoma skin cancers, is an example of its international pull. This in turn benefits the local innovation community by providing access to a global company's knowledge, resources, and networks.²¹

To foster closer engagement between scientists, the community and industry, ANSTO established the *nandin* Innovation Centre in 2018. With support from the NSW Government, a physical hub for members and precinct tenants was developed to actively encourage knowledge sharing and collaboration. Since its inception, the *nandin* community has grown to more than 30 startups, including Amentum Aerospace, a nuclear science startup with radiation analysis solutions for airlines and space agencies.

"Being embedded with the *nandin* community and supported by ANSTO has helped us find traction with customers and provided fresh ideas that have allowed the business to thrive and expand ... With help from the team at *nandin*, we're ready to expand into overseas markets and take on new global customers and contracts."²³

Dr Cornelius

Managing Director, Amentum Aerospace

ANSTO is also actively developing the precinct with key NSW Government partners and is finalising a new masterplan to create opportunities for university investment, deliver development and redevelopment opportunities, and support incoming tenants. The precinct is a significant contributor to the local economy, working with more than 280 local businesses and supporting more than 4,000 workers, predominantly scientists, engineers, and technicians.²²

During COVID-19, ANSTO implemented virtual infrastructure to keep the ecosystem connected. It also made a conscious decision to focus on manufacturing businesses that require value chains and people to collocate to create value.



3.2 Appeal and identity act as a magnet for business and investment

Anchors' international profile and prestige can be attractive to other tenants and a magnet to new investment, especially in emerging precincts.²⁴ Well-known anchor companies in particular help to demonstrate a precinct's potential as a credible location for companies in the innovation economy.

This is especially important for cities across NSW that are still establishing their reputation in technology-led industries. The Atlassian effect, for example, is helping to raise the profile and visibility of both Tech Central, and NSW's prowess in advanced technologies and business scale-ups (see Box 6).

Both **GE** Healthcare in Helsinki's Innovation Village and **ING** Bank in the Cumulus district of Amsterdam are examples of large global businesses which, in partnering with local government to anchor a suburban location, simultaneously provide credibility and visibility to the precinct locally and internationally.

The precinct approach sees the anchors fund a series of non-profit corporate incubation spaces with first-class premises and better networking possibilities. This provides good publicity and allows these companies to transition into a more collaborative working relationship with startups in digital health and fintech respectively.²⁵

Home-grown success stories are often very effective at building a precinct's profile. Ericsson played an especially visible role in the former military site of Kista precinct in suburban Stockholm in the early stages of the precinct's development. That helped to attract international companies such as IBM and Oracle to co-locate. Ericsson also helped establish a partly government-owned development body called the Electrum Foundation to stimulate growth and cooperation among research-led digital companies and actively market the precinct globally.

Anchors also physically provide a visible centre or 'flagship' for a precinct, around which people and companies can congregate. This is especially the case if the real estate asset they occupy is strategically located within the precinct and has ground floors and other spaces conducive to collaboration. Such a role can be very important in lower-density locations where interaction between companies must be intentionally orchestrated.

National broadcaster **NOB** had this effect in the rural Media Park outside Amsterdam, when its commitment to a 10-year lease in the mid-2000s created the rationale for the private precinct landowner-managers to invest in a new museum, re-name streets after TV personalities, host media-themed public events, and present a clear offer to new tenants such as Sony and UBF.

"In a company like ours, we tend to take things for granted. We play it safe, and we get a little bit stale. Sometimes, you just have to go by your gut. You have to have the courage to do something that isn't incremental but is actually a quantum leap. That's the kind of inspiration I'm looking for."

Matti Lehtonen

GE Healthcare Anesthesia and Respiratory Care, Helsinki Innovation Village²⁶

Box 6



Atlassian and Tech Central

Australia's biggest software company, Atlassian has had a dramatic and galvanising effect both on the foundation and acceleration of Tech Central, and on the dense clustering of like-minded technology companies.

The Atlassian co-founders have long argued that Sydney needed a technology district in direct proximity to the CBD, and they have advocated the value of networks among advanced companies. They have noted the distinctive locational benefits of Central, such as the proximity to university expertise and talent, the quality of retail and amenities, and the advantage of CBD fringe rents.

While also working to support local startups, the company worked with industry bodies such as TechSydney and other prominent developers and advisers. It explained that the catalytic project around Central Station required real urgency and planning amendments to accommodate the firm's growth capacity needs, and at the same time support Sydney's wider international competitiveness.²⁷

Other technology firms do not necessarily ascribe their motive for locating nearby to the collaboration or clustering opportunities with Atlassian. Yet the company's presence has signalled the location's advantages to other fast-growing, talent-hungry fintech firms within 800 metres west and east, from Chippendale to Surry Hills. Knowledge institutions have also taken Atlassian's role as a cue to co-locate in emerging innovation space near Central Station.

Atlassian's statement of intent has accelerated the unlocking of 250,000 m² of A-grade commercial space in collaboration with key landowner Transport for NSW and other government stakeholders. It has also helped participants to focus on the design, aesthetics, heritage, and sustainability criteria that industry talent demand.

Atlassian's 4,000-person headquarters within what may become the world's tallest hybrid timber building also provides significant brand visibility for the precinct, as well as a vote of confidence in the value of in-person work and collaboration space.

"The creation of a tech precinct sends a loud signal that we're in the race to take a slice of the world's most valuable market."

Scott Farquahar

Founder, Atlassian



3.2.1 Alignment with precinct brand raises the collective profile and visibility

Anchors are often at the heart of initiatives to re-brand or re-position a precinct (see Box 7), and in some precincts the size and influence of the anchor is such that it becomes synonymous with the place, such as Atlassian and Tech Central (see Box 6).

BBC in MediaCity Manchester is an example of an anchor which took bold steps to move a large part of its broadcasting to a new city, relocating five departments from London and employing 2,500 people. Since its arrival more than 10 years ago, it has used its reputation as the sector leader to communicate Manchester and Salford's identity as a post-industrial success story, supporting and developing new creative industries, and building new and improved networks of suppliers and services.

Anchors can also use their own reputation to help grow the local precinct by attracting new industry partners to relocate and fostering international partnerships to attract inward investment. In the Phoenix Bioscience Core, the arrival of **TGen**, which had an international reputation for its role in sequencing the human genome, strengthened the precinct brand, and within five years helped to attract other leading institutes, including those of Arizona State University and The University of Arizona (see Box 4).



Box 7



Paris-Saclay — Universities combining and adopting the Saclay brand

Paris-Saclay is France's flagship innovation precinct. The French Government encouraged many universities, public research laboratories and private research centres over the last 15 years to establish neighbouring campuses and speed up collaboration between students, academics, and researchers in the suburban corridor outside of Paris that was already home to several national research centres.²⁸ However, drafting a single 'whole place' narrative around all the universities and institutions that relocated to the precinct has been challenging.

In 2014, the umbrella Paris-Saclay University was created, repackaging more than a dozen academic institutions within 49 masters degrees and various doctoral programs. However, the prestigious universities — the *grandes écoles* — were reluctant to integrate with less high-profile universities and concede some of their own autonomy.

The project leaders decided to continue without some of the grandes écoles and created the Paris-Saclay University brand as an umbrella identity instead of merging the more than 20 partners' identities.

Officially launched in 2020, Paris-Saclay University now ranks 14th in the world, third in Europe and first in mathematics.²⁹ The *grandes écoles* have created a separate alliance, the Institut Polytechnique de Paris, and are working with the Paris-Saclay development agency to build an innovation park.³⁰

As part of the sign-up to the wider brand, the universities support a new 45-person technology transfer office as a convener of the Paris-Saclay community, providing faster links to capital for high-potential technologies. By 2020, the office had already invested €34m (A\$50.0m) from its €66m (A\$97.7m) investment capacity.³¹

3.3 Talent attraction and development

Anchors can have very significant effects on a local labour market and influence the propensity of an innovation precinct to attract, retain and develop talent. While general studies estimate the local multiplier at 1.3 jobs created for every anchor firm job,³² anchors also make an area more popular for those with specialised skills, and by improving the local skills base.

"Ever since BT Sport set up operations at Here East, we have committed to the local community. It was something we pledged to do in our lease, believing it was important that everyone who worked for or with us was not just passing through the community, but was an integral part of it."

Jamie Hindhaugh

Chief Operating Officer, BT Sport, Queen Elizabeth Olympic Park Innovation District, UK

3.3.1 Anchors help attract talent to the precinct

Anchors help provide the market identity, brand reputation and organisation capacity to the precinct that attracts and retains talent. Talent is also attracted because of opportunities to connect with other experts and leaders in their fields. These connections provide opportunities for talent to learn from leading experts and develop skills and experience through networks and knowledge-sharing opportunities facilitated by the anchor presence.

Over 30 years **Ericsson** has played an important role in elevating and then reinventing the profile of suburban Kista precinct and selling Stockholm more broadly to international talent. In the first decade it helped grow a large pool of IT firms and incoming talent and participated in the research activities to keep the cluster competitive despite the small domestic market. Later, and working collaboratively as chair on a non-profit foundation with local government, Ericsson was key in raising Stockholm's reputation from a typical Scandinavian capital into a pioneering digital city, supporting the city's new brand direction that borrowed directly from Ericsson's own international reputation.

After Ericsson lost about 50 per cent of stock value and decided to sell its mobile manufacturing business, it recommitted to Krista to establish a mixed-use, 24/7 environment, to create the urban setting to appeal to talent. It has also been working with Stockholm University to successfully reduce talent migrant processing times by more than 90 per cent.³³





3.3.2 Participating in upskilling initiatives

Anchors with specific workforce needs are often active locally in shaping new skills and education initiatives that lead to inclusive jobs and help an area adjust more quickly to demand in new industries. Usually run or funded by universities or larger companies with regular skills needs, these efforts give local people access to the economic opportunities of a precinct (see Box 8).

In NSW, Lockheed Martin and Boeing are examples of anchors that proactively built the skills pipeline. Since Lockheed Martin became the first anchor tenant of Williamtown precinct in 2015, it has focused on local workforce development. In 2019 it set up an 'Altitude Accord' partnership with the University of Newcastle to grow more aerospace system specialists, investing \$40,000 into 10 scholarships.³⁴ Lockheed Martin has also been collaborating with the University on curriculum design.

Meanwhile Boeing Australia helped design the University's Bachelor of Aerospace Engineering and science, technology, engineering and mathematics (STEM) initiatives for school-age children to cultivate future skills supply. Other medium-sized companies such as gaming software firm **Bohemia Interactive** located in Williamtown have also been involved in collaborating with local schools and institutions to bring forward the right specialist training.

Anchors in some international precincts also encourage other institutions to recruit locally. In some precincts, multiple anchors work together on inclusive skills development. For example, San Diego's employer-led steering committee delivers the Inclusive Growth Initiative. It aims to produce 20,000 new skilled workers (educated to degree level or higher) each year by 2030. Anchors in the regional economy track workforce dynamics, provide school students with workplace exposure programs, and invest in post-secondary education to upskill talent within firms.³⁵

Some medium-sized anchor companies have less predictable skills requirements. Their commitment is often to expose and engage younger students and encourage interest in STEM careers from an early age.

On-site internships and apprenticeships are popular and flexible options for delivering on these commitments. For **BT Sport**, a smaller anchor tenant in an innovation precinct situated in one of London's lowest-income boroughs, the approach has been to provide apprenticeships and mentoring with local schools, working alongside a university based in the precinct. It runs an eight-week film-making course for 12 students at a time — with an output broadcast live on the channel.

The opportunities aim specifically to pass on skills to inexperienced students in neighbouring areas, to encourage more diversity in the broadcasting industry. The company also funds a community canteen in the main innovation space of the precinct and has led several initiatives to provide gender-equal access.³⁶

Box 8



The University of Pennsylvania (UPenn) — skill initiatives that help a region adjust to new industries

The University of Pennsylvania (UPenn) has been a forward-thinking anchor for some decades. Among its roles, it is a founding member of the West Philadelphia Skills Initiative (WPSI), which is viewed as one of the leading inclusive skills programs in North American innovation precincts.

Formed in 2012 and funded by public and private anchors, it matches unemployed (for an average of 33 weeks) and underemployed Philadelphian jobseekers with the major employers in and around Philadelphia's University City innovation precinct.

WPSI provides bespoke programs to suit the needs of healthcare and education employers which include UPenn, Penn Medicine and Drexel University. Through training targeted for specific job vacancies, the program helps upskill jobseekers from seven local areas with the skills required by employers. This helps to ensure a sustainable local talent pipeline for the precinct. Participants receive training with third party experts, one-to-one coaching sessions, and a salary during the training period.³⁷

WPSI evolved from a small internship program into a nationally acclaimed initiative delivered by an independent contractor. Programs have instigated full-time employment or access to employment for more than 500 residents each year. The US\$37m worth of wages earned by WPSI graduates over the 10-year period in Philadelphia is one measure of its success. WPSI programs connected 97 per cent of graduates to employment in 2019, compared to only 68 per cent on average across Philadelphia's public education system in 2015.³⁸

The long-term and far-reaching approach of the anchor universities towards skills reflects commitments over many years to build the knowledge development mission into the ethos of their organisations, with the institutional support of trustees. UPenn's own governance facilitates routine collaboration between academic, business, and the broader community, and has involved careful local communication to make the opportunities more visible.

"The WPSI model is particularly appropriate in a context of ...
1) strong anchor employers, 2) a large jobless or underemployed population, [and] 3) a central intermediary ... to broker strategic relationships."

Bruce Katz and Megan Humes³⁹



3.4 Improve industry resilience in the face of economic transition

Evidence shows that the arrival of anchor firms encourages local incumbents to reorganise and shed less productive layers, and in so doing increase the rate at which new startups are formed in their own supply chains by workers forming new businesses. These effects occur across many industry sectors, from aerospace to nuclear and biomedical sciences.⁴⁰

This positive effect can endure even when circumstances change. One outcome is that specialist skills can be recycled into the next wave of technologies and can contribute to formal and institutional capacity to support the ecosystem.⁴¹

This occurred in the case of anchor tenant **Blackberry** in Waterloo, a regional city just outside Greater Toronto. Over 25 years the company had developed a workforce of nearly 10,000 employees in the vicinity, half of its global workforce, and had become a major property owner next to the University of Waterloo, with whom it had major R&D synergies.

When Blackberry had to restructure due to global competition in the early 2010s, losing 80 per cent of its local workforce, a lot of the people and knowledge stayed in the area and gravitated towards the innovation precinct, participating in the Communitech hub.⁴²

Gradually elements of this workforce became leading players in a new generation of scale-up firms. These include Magnet Forensics, founded by a former Blackberry employee, which went public in April 2021. A leaner Blackberry continues to partner with the university to create new cybersecurity-related technology products.

The University of Manchester also demonstrates that anchors can provide resilience beyond the boundaries of its precinct. The university supports two emerging manufacturing innovation precincts at the edge of Greater Manchester, drawing on the success of the first innovation district in the metropolitan core, the Oxford Road Corridor.

These secondary locations benefit from being prioritised by higher levels of government, which recognise that existing know-how in these locations can be repurposed to meet business needs and has potential to 'level up' regional inequalities.

In one precinct, Rochdale, the university's expertise is coming together with three other universities, the National Physical Laboratory, and local manufacturing firms to use industry funding and national and local government money to build a cluster around a new Advanced Machinery & Productivity Institute.

The university harnesses its experience building commercial relationships between academia and industry, while the precinct benefits from a joined-up regional effort called Innovation Greater Manchester, dedicated to addressing the divide between the region's more affluent south and the industrial mill towns to the north.

"[Blackberry's] focus on broad-based quality-of-life improvements and civic engagement over narrower task-specific involvement benefited the Waterloo region ... by preserving an ecosystem of mature, independent firms and creating a supportive environment for new enterprises."

Darius Ornston and Lorena Camargo Innovation Policy Lab, Toronto⁴³

3.5 Help foster knowledge and relationships across the precinct

In many leading innovation precincts, certain anchors provide the 'glue' to connect different organisations and institutions. Others combine a range of activities and investments that allow relationships to thrive and collective knowledge to be shared. In NSW, Cochlear would be one more prominent example of the latter (see Box 9).

There are several ways in which anchors can spread knowledge and foster stronger relationships within an innovation precinct:

- R&D exchange of knowledge and technical know-how with smaller firms
- mentorship and precinct networking
- simplifying and incentivising staff and SMEs to innovate
- · forging shared agendas and missions
- actively participating in precinct governance and leadership.



Box 9



One of the most R&D-intensive companies in the Macquarie Park Innovation District, Cochlear sees itself as an anchor and driver of innovative processes in audiology and beyond.

The firm moved its global headquarters to Macquarie Park in 2010 from Lane Cove, occupying a 24,000 m² building that allowed space for offices, data centres, research lab and manufacturing facilities. Its big aim at the time was to access the intellectual infrastructure and manufacturing know-how provided by Macquarie University, from whom it now leases the building. The move gave it access to a private hospital as well as to the top facilities of the Australian Hearing Hub, and let it team up with Hearing Australia and other children's hearing and early intervention services. The Cochlear building is just 150 metres from the Hearing Hub.

Cochlear is distinctive in that it clustered its R&D intensive activity together with manufacturing facilities and its Asia-Pacific (APAC) sales headquarters.

The firm's Australian and New Zealand (ANZ) headquarters are inside the Hearing Hub itself. Cochlear has direct operations in more than 30 countries yet its Macquarie Park location continues to produce its most advanced technologies.

Aside from research projects with the university, its major contribution is to have co-funded a Cochlear Chair in Hearing and Health, which is a pillar of the University's globally competitive Hearing Department and helps Cochlear raise awareness of the global benefits of community-wide hearing improvements.

One spillover from Cochlear's growth and success has been an outflow of talent to growing companies including Nanosonics and Saluda.

For Cochlear the precinct's improving connectivity, amenity, and reputation are part of the location's enduring appeal. Being near to talent is also a priority as over time Cochlear has evolved as a technology company, needing access to scarce data and Al researchers.

3.5.1 R&D exchange of knowledge and technical know-how with smaller firms

Anchors support localised knowledge exchange and innovation, through their relationships with SMEs and research organisations (see Box 10). Anchors often help SMEs connect and access advice from bigger, more experienced organisations. They do this through:

- tenders to develop products and services, which draw on the skillset of smaller companies in the precinct and rely on open innovation practices and effective procurement, and
- participation in cross-sector groups, which helps break down silos and foster more advanced innovations.

In sectors where the gap in size and resources between large firms and SMEs is especially large, this transfer role does not usually happen automatically, and intermediaries often facilitate it. For example, the BlueChem incubator in Antwerp's Blue Gate sustainable chemistry innovation precinct connects anchor companies such as BASF and Ineos to startups in the sector and helps them scale their innovations into commercial concepts.

The anchors rent a small area of office space within the incubator so they can access the SMEs that are based there, support them, fund the most promising innovations, and gain continuous knowledge about each stage in the innovation chain (e.g. pilot installations and industrial applications).



Box 10



A*STAR, one-north Singapore — actively collaborating and sharing research

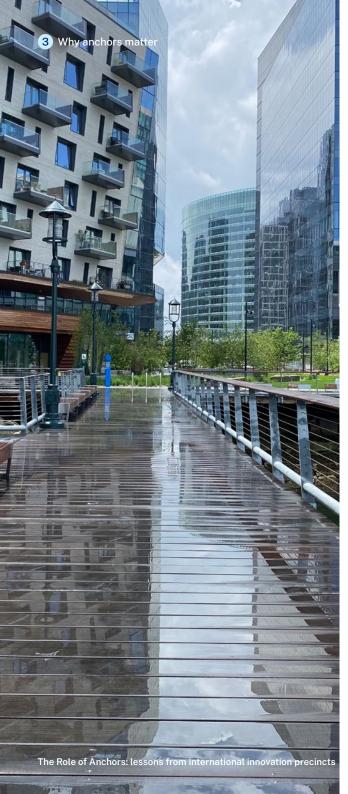
Since 2008 the Agency for Science, Technology and Research (A*STAR) has been a public anchor in Singapore's first innovation precinct, one-north. Supporting a precinct designed to co-locate biomedical. IT and media firms. A*STAR convenes research groups with public and private scientists from various fields including bioinformatics, genomics, and engineering - to work on specific projects and product development. For example, its Genome Institute and Roche Diagnostics developed a SARS detection kit, which was later deployed at the Singapore General Hospital.⁴⁴ It also set up a dedicated commercialisation arm to incubate up to 25 startups. It took membership fees in these start-ups, but no equity.45

Since 2016, A*STAR has hosted an annual two-day science festival in collaboration with public developer JTC and Singapore Science.

The festival establishes the precinct as an agenda-setter for the region on science and technology. It also bridges the gap between local researchers and entrepreneurs through science and technology talks, tours, workshops, and exhibitions.⁴⁶

Over 15 years one-north has grown to house 400 leading companies and nearly 50,000 knowledge workers.⁴⁷ A*STAR's ability to build knowledge in one-north is strongly is strongly related to its:

- consistent core mission to translate science into the real world
- brief to provide a connection between researchers in different industries and disciplines
- strong understanding of major company needs and the importance of competition
- careful selection of international partnerships.



3.5.2 Mentorship and precinct networking

Many anchors proactively engage in mentorship programs for individuals and companies — from the popular Momentum program of Tel Aviv's Reichman University (IDC Herzliya) to BT Sport in London's Queen Elizabeth Olympic Park Innovation District.

Their roles include advisory support, hands-on workshops, and sitting on boards devoted to engagement with networking, events, and inspiring future talent. They also partner with incubators to develop a more precinct-specific approach to hiring, investment, and community engagement, and to sponsor entrepreneurs to improve exposure.

Through this work, anchors themselves benefit from exposure to new ideas, access to talent, and a more experienced local ecosystem, as well as giving back to the community and precinct. **Google's** active role in developing and supporting the tech startup community in Dublin is a good example of this (see Box 11).

For a relocating anchor, these commitments often arise over time rather than being successfully agreed or imposed at the outset. Vertex Pharmaceuticals is a case in point. It arrived in the Boston Seaport District in 2010 as one of the new precinct's first anchors, consolidating its 1,300 employees — formerly spread among 10 buildings across nearby Cambridge — into one signature headquarters building. When contemplating a move to another US state, Vertex Pharmaceuticals initially decided to move to the Boston Seaport District because of a US\$10m state tax credit and a US\$12m city property tax break.

Vertex was also attracted by the grow on space and the opportunity to use the prime location to recruit and retain talented scientists and managers who preferred a vibrant city life. The city government also committed to US\$50m in transport improvements.⁴⁹ Five years later, Vertex expanded its role in talent development and mentorship as part of a voluntary 10-year civic commitment worth US\$500m. This included a 'learning lab' at its headquarters providing internships, scholarships, and fellowships.

Vertex Pharmaceuticals' fellowship program is a one-year training and mentoring opportunity for highly promising early career scientists and physicians to join Vertex project teams and help advance real drug discovery programs. Vertex also subsidises grants to help young scientists and researchers. John Barros, Chief of Economic Development at the City of Boston, explained that Vertex's grants are "...a long-term investment in the people of Boston and the neighborhoods of Boston. That's ultimately what we hope for when corporations move their headquarters to the city."50

Mentorship and inter-firm networking are not yet a hallmark of anchor behaviour in all NSW anchor precincts. International experience suggests that company leadership and industry sector influence the propensity to participate in these areas. This can be fostered by supporting the collaborative capacity of existing companies, and creating easy, low-friction ways to encourage incoming anchors to tap into established networks.

3 Why anchors matter



Box 11



Google, Grand Canal Innovation District, Dublin — actively developing and supporting the tech startup community

Google's move to Dublin was primarily driven by favourable tax terms; however, they have since played an active role in fostering one of Europe's most vibrant tech startup scenes in the emerging Grand Canal Innovation District. They established mentorship programs and access to top entrepreneur networks and resources as part of an effort to engage with the community, enhance the overall labour market, and maintain industry support despite increased knock-on salary costs. Key initiatives include:

 A partnership with Dublin-based startup hub Dogpatch Labs since 2015: Startups can access Google Tech Hub co-working spaces globally and can access mentorship and scale-up resources through the Google for Entrepreneurs and Blackbox Connect programs.⁵¹ Dogpatch has helped more than 90 startups including Intercom and Voysis.⁵² Adopt a startup: Google created this program in Dublin in 2014 and has mentored over 150 companies since. Small businesses can leverage the digital and startup skills of Google's experts. Over an eight-week course Google provides lectures, workshops, mentoring, networking opportunities and funds prizes of up to US\$100,000 in Google Cloud credit to help Irish startups scale up.⁵³

Google has also partnered with Dublin City Council to monitor the city's air quality, using Street View to create street by street maps, noting that "...our ultimate goal is that they will support new actions towards a cleaner, more sustainable Dublin."⁵⁴

3.5.3 Incentivising staff and SMEs to innovate

Anchors can help break down barriers for staff, entrepreneurs, and other organisations to take part in the innovation process. They can integrate different phases of the innovation process into a single office or 'one-stop shop', disclosing patents, helping to transfer technology, incubating businesses, engaging with the wider sector, and coordinating networking and programming (see Box 12). These anchors are often universities as they have the long-term presence and breadth to bring together what can sometimes be a fragmented set of activities.

In NSW, one example is **Macquarie University**, which introduced a new award designed to incentivise partnership, commercialisation, and entrepreneurship in its research community. The Research Innovation, Partnership and Entrepreneurship (RIPE) award, established in 2021, is part of an effort by the university to recognise and endorse effective collaborations with third parties that deliver real-world impact for university research outputs.⁵⁵

In the US, **Purdue University's** Discovery Park District helps entrepreneurs who own intellectual property to accessoffice/lab facilities, shared office equipment, public and private capital, business services, networking, and an angel investors' alliance.

The university's Purdue Research Foundation has established the Discovery Park District on university land to serve entrepreneurs in and around the university. The state government of Indiana has committed US\$5m for 10 per cent of a nanotechnology centre. The foundation's Economic Development Office is committed to placemaking and development. Student, staff and alumni entrepreneur services include workshops with mentors to develop ideas into businesses. Since 2013, this model has helped create more than 325 startups.⁵⁶



University of Waterloo, Canada — empowering a culture of entrepreneurship

The University of Waterloo has a long track record of fostering and strengthening the business community in Waterloo, a small regional city 100 kilometres from Greater Toronto.

The university has fostered a highly commercial culture since the 1960s by establishing an 'inventor as owner' policy, which gives creators full IP ownership. As in other regions, this IP policy has been key to encouraging faculties and students to commercialise ideas, when complemented by national IP policy.

Creators also have had the discretion to choose whether to involve the Waterloo Technology Transfer Office. If they do involve the office, a 5 per cent equity stake in the startup is assigned to the university. By the mid-1990s, the university had facilitated 106 spin-offs, including major firms such as Waterloo Maple Inc, Open Text, and Dalsa. Since 2008, it has supported the creation of 200 startups raising approximately C\$600m of capital.⁵⁷

The university has also set up dedicated departments to support interdisciplinary ideas and provide resources to university-based entrepreneurs. Popular initiatives include the following:

- The Enterprise Co-op program gives students access to problem-based learning experiences with employers and encourages students to commercialise business ventures rather than work for existing firms.
- A dedicated institute within its engineering department explores how entrepreneurship serves technology-based firms.
- The world's largest free student-focused business accelerator (Velocity), part-funded by province and local governments offers an integrated program of entrepreneurship training and professional business mentorship.

As a result, approximately 30 per cent of masters graduates in business, entrepreneurship, and technology courses start a business one month after graduation, much higher than the North American average.⁵⁸



3.5.4 Forging shared agendas and missions

Anchors with shared interests and complementary expertise can come together to build shared capabilities and start to address city or national issues.

There are some examples of these initiatives undertaken by universities, hospitals, and institutes in NSW (see Box 13). In Western Sydney there are also examples of civically inclined anchors who have developed strong local relationships to address issues of employability, digital access, and social cohesion.

Incoming anchors can have the mission and expertise to galvanise public and private sector leaders in their vicinity to innovate on key long-term agendas. In many leading innovation precincts, an anchor's arrival helps to spark new conversations on issues of technology, skills or public health with local regulators and service providers, and results in stronger relationships between local stakeholders.

Anchors with this convening power are usually highly trusted and regarded as independent. Their ability to play this role depends on the appetite of local institutions and whether the scale of the anchor's presence provides the physical venue and calibre of leadership to initiate shared agendas (see Box 14).



Box 13



Westmead Health Precinct

As a discovery-oriented precinct that initially evolved quite organically, Westmead finds itself with a group of purposeful anchors that together span 'whole-of-life' medical expertise.

The Research Hub within the precinct has been a critical enabler of research collaboration in the precinct since the early 2000s. It initially helped research anchors to share access to wet labs and instruments, and gradually became a coordinating mechanism to undertake joint research. The Hub's teams have initiated several joint research projects with CSIRO and built important shared capabilities in areas such as gene therapy.

The strength of the Westmead Health Precinct is the capacity for cooperation between health services and research institutes clustered in one place. For example, the Westmead Institute for Medical Research (WIMR) has relocated closer to the Children's Medical Research Institute and the Kids Research Centre.

Gradually the anchors, through the Westmead Health Precinct Steering Committee, are removing institutional barriers to collaboration and creating more shared infrastructure and informal meeting spaces. More recently, precinct partners have expressed what they expect of new partners and are working together on amenity, placemaking, and activation to ensure the precinct continues to develop as an innovation precinct.



Box 14



Royal College of Physicians (RCP), Liverpool Knowledge Quarter, UK

The Royal College of Physicians (RCP) is a new anchor tenant of 'one of the healthiest buildings in the world', partnering with Liverpool City Council as part of the college's national mission. ⁵⁹ Coined 'The Spine', the A\$60m hub of a wider A\$1.8bn healthcare and science precinct provides a second headquarters for the college in the north of England, in a location where it found a collaborative precinct environment of universities and hospitals and a willing local government. The Spine was part-funded by a public strategic investment fund through which local government obtained A\$20m in grant funding to undertake the infrastructure works. ⁶⁰

The building enhances the college's ability to provide medical training, examinations, and research for doctors in the UK and beyond.

The RCP occupies half of a building which also houses a proton beam therapy centre, an international teaching and learning facility, remote teaching spaces, and related office, laboratory, residential and hotel space. Rooms are rentable for other medical and scientific organisations, enabling collaboration between health partnerships. Alongside this, RCP aims to reduce health inequality through working closely with local health commissioners and providers, offering bespoke education courses and workshops to local health bodies.

To deliver local employment opportunities, the council prioritised local suppliers for the building construction, sourcing a proportion of staff locally. Several apprenticeships at The Spine and throughout the project have also been created.⁶²

3.5.5 Actively participate in precinct governance and leadership

Some anchors are 'invisible' in a precinct and are not especially self-conscious about their role within it, while others realise they are well placed to offer an important source of leadership and inspiration.

So far, governance arrangements are in their infancy in most NSW innovation precincts. This to some extent inhibits the potential of anchors within them to become serious advocates, organisers, and conveners. International experience suggests that anchors develop a more proactive leadership role when there is a growing level of stakeholder trust, and permission or invitation from government which recognises the anchor's commercial credibility. In these cases, anchors often provide a 'voice' for the precinct, as well as offering its market intelligence, expertise, and long-term perspective.

Ineos in Antwerp's BlueGate is an example of an anchor company taking a purposeful leadership role in a precinct within an arrangement set up and funded by a higher level of government and local government (see Box 15).

Anchors can also encourage collaborative precinct governance by enabling the development of mutually beneficial strategies and presenting a shared vision. This usually occurs when anchors have a large enough footprint in the precinct and an agnostic approach to partnership that allows them to build alliances within and across local governments who disagree with each other. Senior anchor leaders who sit on advisory boards in the innovation precinct, and contribute to decision-making, are an increasingly common phenomenon.

Box 15



Ineos and leading chemistry anchors in government-facilitated precinct

Blue Gate Antwerp is a remediated former petrochemical brownfield site that is now an innovation precinct focused on supporting an innovative chemistry cluster. It was built by a public-private investment to help Antwerp become a global capital in basic research and marketable innovation for energy-intensive industries.

To support the investment, the regional government of Flanders in 2016 committed A\$25m per year for 20 years to establish and run an independent organisation, Catalisti, that leads multidisciplinary partnerships and innovation in chemistry and plastics. This 'moonshot' funding enables Catalisti to tackle a host of projects focused on sustainability and innovation in chemistry and plastics by convening the region's businesses, SMEs, universities, and research centres.⁶³

Ineos made an exceptional commitment to spend approximately A\$4bn on a new propane dehydrogenisation plant and the most environmentally friendly ethane cracker in Europe, providing 450 jobs. The firm's Belgian office has built durable relationships with the Port of Antwerp, the City of Antwerp, and the regional government of Flanders.

Ineos has been a willing and proactive partner with Catalisti, sitting as a priority member on its council and collaborating to promote the cluster internationally, explore chemical recycling, and conduct research into bio-based resins.

Catalisti helped establish BlueChem as the incubator and BlueApp as the pre-incubator in Blue Gate, where Catalisti runs its long-term program. In the BlueChem incubator, six major global companies including Ineos have already established a presence renting office space to support small companies. Although the incubator capacity itself is small, at 20-25 businesses, the community is much larger as members do not need to be physically in the building.

As a whole-city connector, Catalisti is helping develop more of the innovation value chain in the sector across two precincts. Startups test ideas, make professional breakthroughs with the specialised accommodation and support in the BlueGate precinct, and then carry out industrial scale-ups in a demonstration factory or pilot installation in the port.⁶⁴





3.6 Invest in precinct development and infrastructure

3.6.1 Investing in shared assets and services

Anchors in several precincts sponsor or co-invest in shared labs, workspaces and other facilities that are open to companies and institutions in the precinct to use, especially SMEs/startups who may not have their own facilities. This is visible in some NSW precincts where there is a large public asset such as a laboratory or airstrip, but less visible in denser knowledge-rich environments.

One prominent international example is LabCentral in Kendall Square, whose shared lab in an MIT-owned building provides space for 60 emerging biotech firms across 15 lab suites and an open lab. Set up with the help of a state government economic development agency grant of US\$5m, MIT has been one of the key real estate partners and sponsors — total sponsorship acquired is US\$22m each year. Tenant residents are on month-to-month agreements and pay in the region of \$15,000 per month for a lab pod and \$425 per month for membership.

As of 2020, Harvard University and MIT are responsible for the highest number of active connections between resident scientists and entrepreneurs in the lab, which has produced over US\$9bn in venture capital in eight years.⁶⁵

Larger anchors may even create or design hubs to provide bespoke services, with several anchors in leading precincts providing dedicated spaces for collaboration. For example, **VU University** in Zuidas Knowledge Quarter in Amsterdam has designed a 33,000 m² lab—named the O|2 Building—where up to 750 researchers from various institutes can work in a shared environment.⁶⁶ This collective use of the expensive and high-quality facilities optimises their use.⁶⁷

Some anchor companies have also set up successful incubators and accelerators to spin out innovations and increase their competitive advantage. Two major examples of this are the Ericsson incubator Ericsson Garage in Stockholm Kista Science City (see Box 16), and Samsung's C-Lab, in the Suwon precinct 100km south of Seoul. C-Lab is open to any Samsung employee and has produced more than 30 successful spin-outs in the first five years.⁶⁸

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Ericsson, Kista Science City Stockholm — successful incubators and accelerators

Ericsson has been fundamental to the growth of Northern Europe's leading digital cluster, Kista Science City. The presence of the anchor tenant in Kista in the early 1980s prompted other companies to follow suit, whilst also leading to the development of office space, lecture halls, and laboratories.⁶⁹

Ericsson founded an **incubator**, Ericsson Garage, to help transform new, innovative ideas into minimum viable products. The incubator runs three-to nine-month programs. Entrepreneurs develop minimum viable product concepts to solve a specific customer problem with the support of Ericsson internal and external partners, and the idea is pitched to the Garage Entry Selection board. Approved projects are further developed and then demonstrated to a senior management board that provides recommendations on the next steps (the creation of a spin-out, further development by a business unit or another Ericsson organisation, licensing of the technology, or its termination).

Initially only open to Ericsson's employees, it is now open to external startups. It acts as an open innovation platform, connecting customers, end users and partners from academia to accelerate the development of new business ideas.

It also enables Ericsson to identify potentially valuable talent to hire and learn about emerging technologies and products.⁷² The Garage projects' members are encouraged to work collaboratively as a startup community in a flexible workspace and project members outside of Kista can contribute through a Virtual Garage tool.⁷³

Streamr, the first Garage project, developed a solution for Universal Music to enhance concert visitors' experience and give them the ability to share their experience of an event. The outcome, a local social network, was handed over to one of Ericsson's business units, responsible for developing it into a commercial product.⁷⁴ The Garage has now expanded to more than 10 Ericsson offices around the world.

Alongside the Garage, Ericsson also collaborated with other stakeholders to establish the digital testbed Urban ICT Area in 2016 to develop, test, and display technologies in urban environments.⁷⁵ This is crucial to the future shift of Kista Science City into applied urban tech.



3.6.2 Providing land for development that supports the precinct's vision

Putting equity into real estate dedicated to innovation outcomes is an important role that several leading anchors play (see Box 17).

Anchors with large land holdings sometimes provide high-quality space and amenities for others that align well with the precinct specialisation—such as what the developer **Stockland** has been working on in **Macquarie Park**. In these cases, a patient approach to return on investment is important. So is the selection of suitable real estate partners who understand the specialised needs of the precinct and can ride out difficult periods.

Anchors also unlock more innovation-friendly development at sites away from their home location. The **University of Waterloo** is one of the leading examples among smaller cities — it established a satellite campus closer to the 400,000-person region's CBD which has helped students access experienced innovators and launch startups more effectively. Here the land deal with the neighbouring City of Kitchener saw the city support the university with C\$30m to build its School of Pharmacy to anchor a new health science campus. The university is now in effect an anchor to the Kitchener Innovation District which sits adjacent to Kitchener CBD.



Box 17



Trinity College, Grand Canal Innovation District, Dublin — using land for an innovation campus

With global tech and life science companies such as Google, Facebook and Twitter already located in Dublin's docklands, Trinity College Dublin (TCD) decided to turn its 2.2 ha site adjacent to Grand Canal Quay into an innovation campus. TCD committed €150m over 10 years, ⁷⁶ some of it from the Irish Government. The university plans to create an internationally visible innovation precinct in Ireland and reinforce Dublin's emergence as a global tech city.

The university also aims also aims to break down silos within the innovation community, and foster a culture of partnership.

Upon completion with the help of a development partner, the €1.1bn development site will include an unusually high share of non-academic space (60 per cent) for a university campus and 20,000 m² of cultural and related uses.⁷⁷

The commitment to deliver innovation spaces for entrepreneurs, startups, and corporate innovation teams, 78 and not simply student housing, is a core part of the approach. A 20,000-25,000 m² research institute dedicated to finding cross-disciplinary solutions to global challenges is scheduled to open on campus in 2027.79 And TCD is also relocating research facilities to bring them into the mix and increase interaction and industry engagement.80

"We want to connect together the ecosystem in a meaningful way — to take the assets and charge what we have. We need to create the physical placemaking; otherwise the value of agglomeration of all that business and talent is lost."

Place Leader

Grand Canal Innovation District (anonymous)

3.6.3 Providing the catalyst or enabler for public or private investment

Large anchors often increase the viability of new infrastructure investment, especially for emerging precincts that are in a process of redevelopment or require significant up-front land remediation and infrastructure preparation.

In Phoenix the arrival of **TGen** alongside other anchors made the establishment of light rail viable, while in Barcelona, **Telefónica's** arrival as an anchor helped secure co-investment into superfast broadband and the commitment to host the Mobile World Congress annual global event.

An anchor's size, profile and long-term commitment can help influence the types of investment that create the kind of density, mix of uses, amenities, or public space quality required for an innovation precinct.

Anchor companies can influence the urban placemaking character of a precinct, by locating many buildings together rather than in isolated campuses, helping cluster the customers who frequent quality restaurants, amenities and services provided by many small businesses. Clustering provides critical population mass that attracts social infrastructure and place-based investment to improve quality of life. In effect these anchors have the potential to act as catalysts for the redevelopment of large areas and spur private reinvestment (see Box 18).⁸¹

Anchors can also provide confidence to invest in expensive and specialised workspace. The Agency for Science, Technology and Research (A*STAR), Singapore's lead public sector R&D agency moved three of its research arms in microelectronics, materials, and data storage to Singapore's one-north innovation precinct. Given the early stage of this suburban precinct, this move provided the certainty needed to the publicly owned developer that the use of their interdisciplinary laboratories would be maximised. Small and medium-sized anchor companies within smaller sub-precincts can also provide the confidence and rationale to invest in innovation spaces.

In Mitte, Berlin, the presence of **Soundcloud**, an online audio distribution platform and music sharing website, encouraged the private campus developer, Factory Berlin, to add additional floors and include more collaborative spaces. The company could then work next to different sized firms at different development stages, and undertake more intentional networkbuilding. Soundcloud helped Factory Berlin to pioneer an artist-in-residence program that has since grown to 220 artists. The hub has outperformed the rest of Germany in capital raised.⁸²

The size of an anchors' commuter base or digital requirements can also help secure necessary infrastructure improvements that benefit a wider precinct. Amazon in Seattle's South Lake Union is a notable and perhaps exceptional example where the sheer size of the employment base—which had grown to more than 40,000 workers—drove the case for new tram services to improve existing connections between the precinct and the wider city.

Amazon in fact invested US\$5.5m into the city tram line to increase services from every 15 to every 10 minutes, to help meet worker demand during peak travel times. Amazon also provided funding for 10 years of operation for the additional tram, and more recently, provided funding for additional bus capacity and paid US\$80m to provide free public transport to its employees.⁸³



Manchester Oxford Road Corridor — reinvestment catalyst

In a large inner-city area with complex land ownership, Manchester's main innovation precinct closely aligned the universities and other public and research bodies around a shared vision and a shared spatial framework. The Oxford Road Corridor Partnership encourages landowners not just to accept the highest offer for new development but to prioritise projects that can enhance connectivity, tenant, and resident diversity and use mix. The first phase of development has seen significant investment in buildings, such as City Labs and Circle Square, to develop the campus and grow its visibility.

The University of Manchester, a major anchor and landowner in the precinct, is developing a small 'precinct-within-a-precinct' to add momentum to the area's reinvestment and help ensure the project develops the critical mass necessary. This area sees the university build on the already existing momentum around the district and aims to provide additional space for innovative companies to start and scale up.

The university has already relocated teaching and academic research activity in its main campus nearby, where it has invested more than £1bn in world-class buildings and facilities.

Upon completion, the precinct will complement Oxford Road Corridor's existing commercial and innovative space offer with an additional 1,000 housing units, two hotels, commercial and leisure facilities, and 1.2 ha of public space — creating a vibrant mixed-use destination in the city. This development is one of the last major development opportunities in the city and adds to the wider regeneration taking place in the area.

The university had a high standard when procuring a 15-year joint venture partnership with a development and investment partner. It sought a shared long-term vision for the master planned district between the anchor and the investor, with a commitment to sustainability, inclusivity, and collaboration. Bruntwood SciTech was selected to bring capital and know-how to foster innovation while the joint venture company owns the land assets.⁸⁴





3.7 Deliver wider social and inclusiveness benefits for the precinct community

Anchors have the advantage of simultaneously growing the base of higher-value jobs, while also providing avenues for local education, training, and civic participation. Anchors can provide the bridge between different precinct stakeholders and the wider city or local area through a variety of engagement tactics, well-programmed public facilities, and the creation of community hubs that are genuinely inviting and provide mixed amenities. Community engagement with the immediate surrounding area is a core focus for many long-standing anchors, and this is certainly observable in areas of Western Sydney, for example.

It is more common for anchor institutions to participate at scale in these activities than anchor companies. Within NSW priority precincts there are not many examples of anchor businesses visibly taking a lead in this area. However, international experience suggests that companies will do so when community opportunities align well with their own brand and mission.

Large employers with public accountability increasingly recognise that they require a 'social license to operate' — which means they rely on the perceptions of local stakeholders and citizens that their work is socially valuable and helping to solve and not exacerbate societal challenges. Companies such as **Google** and **Amazon** are among those to have recognised this since 2019 after resistance to them establishing an anchor presence in Toronto and New York respectively.

3.7.1 Amenities and infrastructure dedicated to local communities

Long-time anchors increasingly deploy their expertise and capital to address the needs and challenges of the lowest paid or most excluded in the local area. They are working with other public and private sector stakeholders to provide education, services, and infrastructure to low-income and traditionally underrepresented communities in the innovation precinct. These include improvements to public safety, digital literacy, and affordable housing and retail to address local social challenges.

Drexel University, which anchors Philadelphia's University City district, is working with the local government in an underserved neighbourhood to develop a middle school that will be funded by profits from the larger commercial development of the entire neighbourhood. It is also working on improving safety in the neighbourhood, helping to fix street lighting, and providing safety ambassadors to patrol 60 blocks every night in the Mantua neighbourhood.⁸⁷

There is clearly more ambition among anchors with a long-term multi-decade footprint in NSW's innovation precincts to contribute to their precinct, in the right circumstances and context.

"The social and civil development of the local community is not only the necessary thing, but the right thing."

Ira Harkavy and Anthony SorrentinoUniversity of Pennsylvania

3.7.2 Using purchasing and procurement to benefit local businesses

Anchors are increasingly adapting their procurement strategies to expand local businesses, especially those providing goods and core services. Procurement strategies are a hallmark of many of the most advanced innovation precincts globally, especially in the United States, with the University of Pennsylvania's leading the way in socially responsible procurement policies and programs (see Box 19).

Procurement power is especially effective when combined. In some regions anchors come together to strengthen their collective role of as purchasers and community infrastructure builders. For example, after assessing the procurement habits of 14 of the region's largest anchors, San Diego set up a voluntary 'Anchor Institution Collaborative' of 45 anchors, large buyers, and community partners to commit to spending more with local, small, and diverse businesses.⁸⁸



Box 19



University of Pennsylvania (UPenn) — socially responsible procurement

As the largest private employer in Philadelphia's University City District, UPenn has prioritised local community involvement in the innovation precinct as central to its economic inclusion agenda.⁸⁹ It has a long-standing focus on socially responsible purchasing and procurement to help small, locally owned, and minority-owned businesses to grow, develop skills, and succeed.

In 1986, it introduced the "Buy West Philadelphia Initiative", which prioritised local purchasing efforts. Between 1996 and 2006, the initiative resulted in tens of millions of dollars of supplies being purchased by the university from companies based in the precinct and West Philadelphia, as well as seeing contracts awarded to minority-owned and female-owned construction firms totalling US\$134m.90

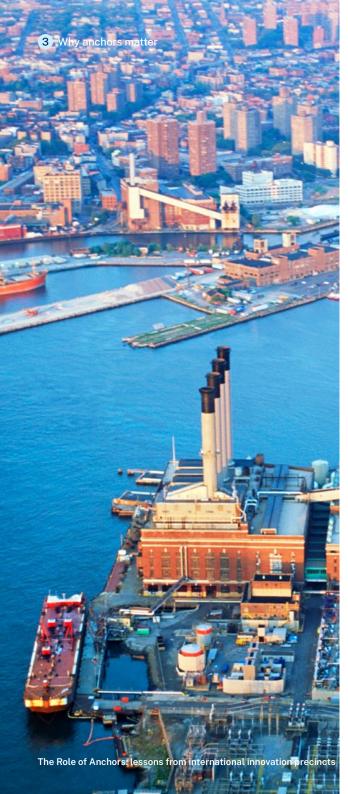
The university continues to prioritise local and diverse procurement practices through its annual US\$1bn spending budget.

 According to its Supplier Diversity and Inclusion Program, the university ensures that at least 10 per cent of its annual purchasing budget is awarded to local businesses.⁹¹

- Local, women-owned, and minority-owned suppliers make up 40 per cent of the vendors participating on the Penn Marketplace, the university's online purchasing portal for suppliers and buyers.
- UPenn works with city-based government agencies and community development organisations such as Philadelphia's Enterprise Center to identify, promote, and cultivate long-term relationships with city-based suppliers.⁹²

"You must embrace that you are in a community ... we have a very intentional strategy in which we set out to procure as many goods and services from ... businesses of colour as we can. There needs to be a greater understanding of 'place' and how each anchor can use its own resources to procure locally and support this through networks."

Ira Harkavy and Anthony Sorrentino
University of Pennsylvania



3.7.3 Diversifying workforce opportunities

The expertise and the brand identity of anchors also provide a route to addressing disadvantage in and around an innovation precinct, and to accelerating environmental ambition of precinct occupants.

In New York City's DUMBO district, Etsy's business model focuses on empowering female and minority entrepreneurs through its direct and indirect job creation. Etsy also ensures its tenancy location supports its commitments to bike-to-work and low carbon building footprints.

Other anchors tailor enterprises/incubator programs to support women entrepreneurs in developing business ideas into startups. For example, **Steiner Studios**, which anchors the Brooklyn Navy Yard, is working to promote diversity in the film and television production workforce by pledging US\$50,000 per year to advance opportunities in media and entertainment to New Yorkers of colour and women through job-training programs. It is also committing \$250,000 over 10 years to a non-profit organisation supporting gender equity and inclusion.⁹³

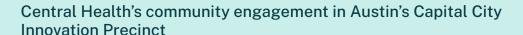
3.7.4 Civic participation

Community engagement with the immediate surrounding area is a core focus for many long-standing anchors. One such anchor is Central Health, a founding member of Austin's Capital City Innovation which is actively investing and participating in the local community (see Box 20).

King's Place in King's Cross is an example where the 3,000 employees of the anchor — The Guardian — play a crucial role in activating and animating the building's large open atrium. The atrium is open to the public to enjoy without needing an appointment or having to buy a coffee. The design of the building — to include halls, studio spaces, and a concert hall — means it can be used for a range of community events and conferences. This led to it being heralded as having 'rewritten the book on how commercial property can integrate with the life of a city' after the British Council of Offices named it the United Kingdom's 'Best of the Best' in its 2009 awards.⁹⁴



Box 20



As a founding member of Austin's leading life sciences innovation precinct, Capital City Innovation, Central Health is a health care provider to low-income people that is also focusing on connecting Austinites to jobs and opportunities. It sees its role as being not only to partner with local companies to support healthcare delivery, but to use its lease income from its six-hectare site in the precinct to diversify its revenue, so that it does not rely solely on funding from property taxes.

Understanding the importance of the community's voice, Central Health has involved the community in initiatives. These include 'Community Conversations' to obtain feedback from community members, 95 large-scale surveys assessing health care needs, and focus groups on access to health care.

Along with several big companies and city government, Central Health invested in the Austin Impact Accelerator. The workforce development accelerator program gives low-income Austinites viable paths to livingwage jobs in three key sectors highlighted in the region's community workforce strategy: healthcare, information technology, and advanced manufacturing.



While the logic for anchors and precinct partnerships for mutual advantage is strong, international as well as NSW experience suggests that delivering on this promise is by no means guaranteed or automatic. The roles, expectations and demands made of anchors within innovation precincts are not straightforward to apply in every context.

There are at least five widely observed reasons for this:

- 1. The **fast pace of industry change** can create uncertainty, potentially forcing anchors to change course or relocate with ramifications for the local ecosystem.
- 2. Anchor leaders are often time-poor, with limited capacity to dedicate significant resources to precinct-wide activities.
- The networked capability of an anchor will influence the extent to which anchors build meaningful connections and deliver innovation outcomes.
- 4. Not all anchors are place-conscious or are willing participants who consciously seek to be in a precinct to access and participate in a business environment with lots of interaction and the sharing of ideas or knowledge.
- 5. The pre-existing strengths of a given location and local sources of demand can influence an anchor's contributions to the local ecosystem.

3.8.1 Fast pace of industry change

Most industries which anchors are part of do not grow in a linear fashion. The rapid pace of technology growth, the effects of new discoveries, and the sudden shifts in customer behaviour — all these mean that we cannot predict or plan either anchors' trajectories or their commitments to a given precinct. Fintech in TechCentral would be one prominent example. Companies may dramatically downsize, upsize, or start to need a new set of skills that cannot be met by the local market. This can force them to relocate at short notice, with potentially damaging effects on the local ecosystem. Others may decide on a change of course about whether to in-source or out-source innovation, which can affect their talent needs and their relationship with spin-offs.

The rapid growth of e-commerce platform **Shopify** in Canada's cities is a case in point. The firm outpaced its growth expectations and projections because of the unanticipated success of its online/offline app ecosystem. By creating more demand for its complex engineering, product, UX and merchant services, it had to unexpectedly double its physical footprint in the talent-rich city of Waterloo, shrink its space in Ottawa and expand in Toronto's CBD. By contrast flagship tech firms can also fail and collapse, as in the case of telecoms multinational Nortel in Ottawa, and in doing so bring about a period of decline and protracted recovery of jobs.⁹⁶

3.8.2 Limited time or capacity

Anchors rely on flexibility and agility as they grow, recruit talent, access space, and gain regulatory approvals. Individuals within an anchor are rarely place-bound. Many are instead seeking to work specifically with leading experts or partners based anywhere around the world, or in the region. While many see the logic of a coordinated approach to cultivating strengths in an innovation precinct, many do not easily find the time or capacity to allocate significant resources to precinct-wide activities.

Even in cases such BT Sport, which has been very proactive in the Olympic Park precinct of East London, it has been important to create lean and low-friction ways for the company to engage with local partners where there is a logic to do so. Relationships between anchors and other partners within innovation precincts must be carefully and sensitively fostered for mutual advantage, and not seen as imposed, unpredictable or unduly onerous. Anchors often benefit from very proactive facilitation and skilfully organised networking to ease this capacity burden.



3.8.3 Networked capability of an anchor

Weak relationships between the anchor, specialist institutes and local businesses — together with a lack of familiarity of the ecosystem in many innovation precincts, including NSW — can make it difficult to mount meaningful research projects, or to connect research to use cases and commercial applications.

While anchors can take steps to become more engaged and outward-facing, it can be very challenging and slow to build this from scratch where their senior and mid-tier staff have few networks and limited experience at collaborating. Internationally, this has been a challenge in Paris-Saclay, where key institutions in the defence sector and universities are gradually building relationships after decades of being more inward-focused.

3.8.4 Whether an anchor is place-conscious

The size of an anchor's proposed presence in a precinct is not the only or main indication of its commitment. Companies in most larger-footprint industries are not familiar with or used to participating in an innovation precinct. They are principally concerned with the efficiency of the location in terms of transport links, access to the supply chain, and accessibility to a workforce of diverse incomes.

However, a growing number of companies consciously seek to be in a precinct to access and participate in a business environment with lots of interaction and the sharing of ideas or knowledge. They may devote a specific niche or innovation team to participation in a precinct in a very targeted way. This has certainly been the case in **Telefónica's** decision to anchor the emerging 22@ district in Barcelona in the 2000s, and in **Boeing's** participation in Sheffield's Advanced Manufacturing precinct.

Ensuring prospective anchors are familiar with what the precinct requires is an important part of any assessment process. They should be familiar with any commitments as well as the benefits it offers.

3.8.5 The pre-existing strengths of a location

The potential contributions of an anchor will depend to a large extent on the the varied potential of places themselves. Without enough local sources of demand—adequate access to capital, availability of skills, pressures on local industries to become more efficient, and effective networking between firms—a large tenant or institution is unlikely to encourage the concentration of innovative businesses and research organisations.

In Grow North in Auckland, for example, **Vodafone** has not yet had a significant effect on innovation outcomes. This is partly due to wider issues for growth companies in accessing funding and adequate rail and broadband connectivity. In these cases, government investment by itself may be inadequate. Other locations may be more in demand but lack adequate affordable space for entrepreneurs and emerging businesses.

To optimise the value created by investing in or facilitating an anchor to move to a specific location requires careful choices and consideration from those who are empowered to lead and shape an innovation precinct — whether government teams, independent place leaders, or private and civic stakeholders. It also requires a commitment from both government and development partners to ensure the right infrastructure — physical, programming, legal and governance.

3.9 Can precincts succeed without an effective anchor?

Based on international experience, there are only a small number of cases where precincts have become globally significant without a visible anchor or high-profile arrival of a large company or institution. Anchors are often critical, and the timing and character of an anchor is commonly a key part of a precinct's medium-term success.

There are three groups where precincts succeed without a conventional anchor:

 Locations may arise organically, often in or near to CBDs, in contexts where clusters of like-minded companies start to assemble in an affordable, trendy, and well-located neighbourhood. Often they supply and service larger firms based in an expanding CBD. Examples of these include Tech City in London, Kreuzberg in Berlin, and East Village in San Diego.

In each case the precinct's ecosystem has thrived thanks to wider efforts to attract technical and engineering talent, and the proximity to corporate and government agencies who are hungry 'consumers' of innovative products.

In these locations it can be important that the precinct reach a critical mass of relationships and energy between smaller firms *before* larger anchors move into an area. This is arguably what took place in the Surry Hills and Camperdown neighbourhoods in Sydney prior to the arrival of Atlassian, Afterpay, and Canva among others.

 Locations may arise from a core hub building, prototyping the kind of spaces and support systems that effectively stimulate demand to create an innovation community. This has been the case in examples such as MaRS Discovery District in Toronto and Wynyard Ouarter in Auckland.⁹⁷

In these circumstances the city/state government often assumes the role of an anchor, providing the resources for innovators and entrepreneurs, as well as the confidence to invest in permanent facilities. Anchors may play a key role, but often later in the development cycle of the precinct. For NSW this may be relevant for certain city centre precincts in regional cities.

 In the third group, large infrastructure or amenity assets become centres of gravity for technology and social innovation companies to explore ways of retrofitting or devising new business models.

The Port of Rotterdam's role in the city's Makers District, and Busan's Eco Delta project, both show large organisations learning to become a kind of anchor of their own, supplying space and crowding in companies in urban tech. Opportunities for this approach in NSW may emerge in locations such as the Aerotropolis, given the land development opportunity and strong sustainability imperatives.

3.9 Can precincts succeed without an effective anchor? (continued)

Conversely, there are many examples of precincts where a quality choice of anchor and the behaviour of the anchor is essential. Relatively unknown or unattractive locations rely on anchors to change perceptions, attract smaller companies to the precinct and avoid feeling like 'no-man's land'. Especially in smaller locations and regional cities, they are essential as a customer and collaborator for innovation in smaller businesses.

For innovation precincts already anchored by a large institution, it is usually essential for that anchor to opt in self-consciously to what it means to anchor a precinct, and for one or more suitable anchor companies to complement it to create the required volume of commercial linkages.

Many innovation precincts that have not succeeded are in locations where large institutions have embarked on an expansion and redevelopment process rather than an innovation process, and have not been adequately incentivised to collaborate externally and reorganise internally. It is important for education and health precincts in NSW to ensure the focus is on how these institutions embark on internal cultural change and learn to engage astutely with different kinds of business.

This makes the attraction, selection, and negotiation of anchors an essential ingredient for a precinct's success — something that is explored in Chapter 4.





Attracting effective anchors

As they grow and evolve, anchors face strategic choices on whether to relocate, invest in their own expansion, consolidate their staff under one roof, or rethink their mission or real estate strategy.

At the same time, the aim for many innovation precincts is to attract anchors and lead tenants that can take advantage of the physical location, really exemplify the precinct's vision, and can work together effectively with other public and private organisations. Understanding how to align the ambitions of anchors and precincts is an important strategic question in many places around the world.

A precinct by itself rarely succeeds in attracting effective anchors in a vacuum from the local context. International experience indicates that an anchor's appetite to move to or grow in a precinct relies on wider demand-side conditions—the market size, local skills, the networks, the access to capital, and the brand story—rather than just the specific property offer. An anchor's choices are also influenced by personal or company-specific factors such as the origin of a company it has acquired.

Understanding the true competitiveness of the location and tuning in to the outlook of prospective incoming anchors are essential for any place leadership team in NSW.

A good supply of talent and highly skilled workers is essential for anchors as well as for attracting the high-skilled businesses that service and supply the anchor. This talent is attracted to locations with high quality of life.

To attract and retain talent, governments and other developers and institutions must consider the wider planning and resourcing required to improve the local economy by building local skills, delivering quality amenities, and supplying suitable housing.

Attracting anchors requires precincts to:

- 1. understand an anchor's motivations to join a precinct
- 2. identify the right anchor to add value to the local ecosystem
- 3. negotiate effectively with anchor leaders and representatives to optimise their value.

This chapter explores these three aspects in more detail.



4.1 Understanding an anchor's motives to join a precinct

Around the world, more anchors — whether public or private — are thinking about how and where they occupy space. They are considering whether the location and space offer them access to talent, serve customers/users, and provide a bridge into other knowledge and business networks.

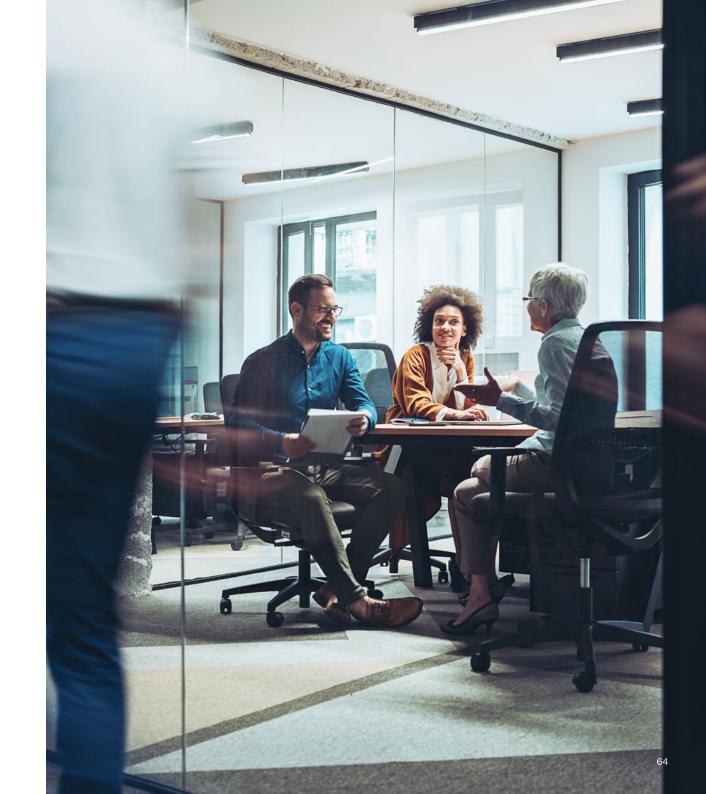
Attracting and engaging with prospective anchors starts with a clear understanding of the benefits different anchors seek from a precinct. Of course, many anchors may simply be seeking somewhere convenient, affordable, tax-efficient, and suitable for their customers and clients.

Yet precinct and anchor leaders themselves point to four wider themes that increasingly influence an anchor's motives to join a precinct:

- 1. ecosystem benefits
- 2. infrastructure and amenity
- 3. available talent and future talent pipeline
- 4. brand and precinct profile.

These differing motives are not always easy to see and are not always explicit choices of the anchors themselves. In addition, the needs that an anchor has from a precinct may change over time, whether in response to corporate strategy or market conditions.

For regions pursuing precinct strategies, it is important to understand the drivers behind anchor decision-making and how precincts prepare their locations to attract anchors. In many cases, including in NSW, not all these ingredients are in place at the outset, so they must be fostered. This points to the roles that smaller anchors, incubators and public agencies can play as the precinct matures (see Box 21).



Box 21



Anchors and Wynyard Quarter Innovation Precinct

The development of Wynyard Quarter Innovation Precinct in the heart of Auckland since 2011 illustrates several interesting aspects of the role of anchors in the development of innovation precincts, as well as the role of city development agencies. The precinct also demonstrates how the nature and role of anchors can change over time.

Establishment phase

To generate a sense of momentum and commitment following the successful completion of the business case, the Regional Council assumed the role of an anchor. This led to the establishment of a prototype innovation hub in a vacant building that was scheduled for future demolition.

This innovation hub, developed by Auckland economic and cultural agency Auckland Unlimited, became home to GridAKL, a shared working and incubation space to host the region's creative technology sector. The space became a key resource for innovators and entrepreneurs across Auckland and gave partners confidence to move ahead with the development of more permanent facilities.

In this first phase small fast-growing technology startups, such as online video production company 90 Seconds, operated as anchors alongside the innovation hub itself.

Emerging phase

While GridAKL moved into its first permanent space and developed its role as an anchor for Wynyard Quarter Innovation Precinct, new anchors emerged. In each of the newly opened buildings, global companies such as Google and Amazon Web Services arrived alongside significant domestic technology companies, such as Online Republic, a global travel e-commerce group, and Davani, a business and technology consultancy. Each took a key tenancy in the space and lent their brand to the innovation precinct.

These companies were attracted to the precinct for the scale, visibility, and locational appeal of skilled talent. The attractiveness of the precinct was further reinforced by the placemaking focus of Pānuku Development Auckland, responsible for creating a rich and diverse urban environment with amenities for the local workforce, all of which brought direct benefits to businesses locating in the precinct.

Interestingly, while these new anchors added to the brand and visibility of the precinct, the companies themselves have been largely 'closed' in that they have not actively sought to integrate themselves in the emerging tech ecosystem or local community in any tangible way.

Active phase

Government continues to play a key role in activating the precinct, participating in a signature collaborative space, Hatchbox. Other global and domestic technology companies, such as IBM and Datacom, developed new headquarter facilities on sites that are 'proximate' to the innovation precinct. They leveraged the place and brand benefits of the precinct without formally being part of the precinct as originally defined, effectively extending the precinct boundaries and creating new anchors.

As the group of larger corporate occupiers in the precinct and adjacent area grew, they organised themselves into a collaborative group operating under the Wynyard Innovation Neighbourhood banner to proactively engage with the ecosystem, in contrast to the more closed approach of some of the precinct tenants.

As the precinct grew, it attracted a purposebuilt campus for the private Media Design School, which is now highly engaged in connecting to and activating the precinct and sees significant benefits for students from closer linkages to industry.





4.1.1 Ecosystem benefits

Anchors in many industries often look for opportunities to become more tightly networked, informed and collaborative with highly specialist researchers, designers, funders, suppliers, and service providers.

For larger incumbent companies in established sectors, a presence in an innovation precinct provides a welcome source of inspiration and disruption through interaction with younger firms and researchers and entrepreneurs doing work in adjacent fields.

Such firms may consciously seek to be in a precinct to access and participate in a business environment with lots of interaction and the sharing of ideas or knowledge. This has certainly been the case in **Telefónica's** decision to anchor the emerging 22@ district in Barcelona in the 2000s. Meanwhile for fast-growing companies who are continually developing new tech, such as **Afterpay** in TechCentral, proximity to universities that are recognised producers of market-ready talent and who they can collaborate on advanced R&D projects is also a big advantage.

Adapting ecosystem requirements to industry needs

The way each industry operates affects the kind of ecosystem environment that an anchor seeks, and the roles and expectations that can be placed on an anchor in an innovation precinct. Many anchor companies, for example, are part of highly regulated industries, with onerous standards of compliance and strict requirements for IP privacy.

Companies with rigid organisational hierarchies and strict reporting lines can be very conscious of the costs of failure. In these cases, companies often prefer to be involved in a precinct through carefully orchestrated partnerships and collaborations.

Take Dutch multi-national bank **ING**, one of the 30 largest banks globally. Its anchoring of the Cumulus Park precinct in suburban Amsterdam was motivated by a desire to assemble multiple industries on site to support the bank's own innovation acceleration programs. This allowed ING to team up with Plug and Play, a Silicon Valley-based startup scouting agency that provides the bank with access to the most promising companies, as well as to partner with Delft University of Technology on AI to future-proof the bank's compliance.

In contrast, anchors from leading automotive or aerospace companies tend to prefer working in controlled environments alongside a non-rival to adapt to competitive pressures and identify and adopt new technologies and production processes. This was the case for **Boeing** when it partnered with the Advanced Manufacturing Research Centre in Sheffield to be an anchor tenant for a new precinct, to embed future titanium technology in its next generation of light aircraft. And for pharmaceutical companies, participation in a precinct can be motivated by access to researchers and investors around specific projects, solutions, or treatments.

Every sector's anchors show distinct patterns in what they hope to gain from partnering and building an ecosystem. The challenge for an innovation precinct is to match these to the needs of the location in its current stage of evolution, given the existing composition of firms and the capabilities and readiness of other institutions to team up with the anchor.



4.1.2 Infrastructure, connectivity and amenity

Anchors are often on the lookout for specific kinds of workplace and connective infrastructure. Within buildings this will include access to bespoke, flexible workspaces, often with large floorplates, and flexible lease terms. More broadly they frequently seek ultrahigh-speed broadband community networks, room to grow, and walkability to other buildings, amenities, and easy connections to other city locations.

In digital technology sectors, anchor tenants currently tend to prefer consolidation over setting up several satellite offices. In cases such as **Afterpay** in Sydney's Tech Central, there is a recognition that its workforce would be reluctant to travel to other locations, or to travel between locations, and experience a drop in the standard of amenity and experience. A precinct's floorplate size and scale of building to accommodate these needs is therefore important.

The addition of infrastructure (transport, utilities or digital) to a precinct can be attractive to incoming anchors. The incremental development around the MaRS Discovery District in Toronto was particularly effective in attracting tenants and new anchors, bringing forward innovation space in two phases approximately six years apart, gradually reaching full capacity.

A third growth phase for MaRS is currently being pursued in a neighbouring waterfront site, allowing public and private anchors—labs, universities, and spin-outs—to grow and access an improved neighbourhood environment. As residential demand has soared, the precinct has also invested in an urban manufacturing space to break the pattern of traditional high-density residential developments and combine residential and light manufacturing spaces.

Infrastructure is not a one-time incentive for an anchor to join an innovation precinct. In cases like **Technoparc Montreal**, infrastructure improvements have been key to consistently attracting different kinds of large anchors as the scale and sector mix of the precinct has evolved over a 25-year period.

Beginning with Astra-Zeneca in the 1990s, the precinct attracted Thales (1997), Nortel Networks (1998), Genetec (2005), Bombardier (2008), Bristol-Myers Squibb (2009), Hewlett-Packard, Conglom et Ciena (2010), AJW Technique (2013), ABB and GreenCross Biotherapeutics (2017). The park's leaders responded early to changes in workspace demand with an express electric autonomous train connecting the precinct to Montreal CBD in 20 minutes as well as the airport (three minutes) providing better access to international visitors.

Quality infrastructure and high connectivity must also be complemented by liveability, a sense of place, healthy lifestyle options, access to active transport and public open space, and other quality of life features.

Box 22



Airport and base facilities underpinning Williamtown Aerospace Precinct

The exceptional facilities and capabilities provided by the combination of RAAF Base Williamtown and Newcastle Airport are proving highly attractive to a significant cluster of aerospace companies.

Lockheed Martin was the first of a series of anchor tenants to relocate. After nearly 10 years in the Hunter Region, it became the first anchor tenant to benefit from new secure facilities. It was attracted by the presence of the RAAF base, the high level of digital security that the company increasingly required, and the opportunity to accommodate engineering and IT specialists on site.

In recent years the NSW Government has prioritised the location as one of six regional Special Activation Precincts (see Box 23). It has provided A\$12 million in investment funds to unlock development sites that allow for larger and more integrated warehousing infrastructure.

In 2021 BAE Systems made a commitment to extend its lease at Newcastle Airport by 34 years and develop a large additional airside site to allow RAAF Williamtown to grow its presence at the Base. It was attracted by access to the stable long-term management of the F-35 Joint Strike Fighter jet fleet. BAE Systems is also attracted by the work of precinct managers to ensure the future development of bespoke facilities, making it possible to integrate long-term distribution and transportation of essential components.

Importantly the additional infrastructure ensures sovereign capability to sustain military activities, while also creating a depot function in Australia which allows mechanical, avionics, and structural technicians to be trained at the same facility where jets are designed and built.

More broadly the infrastructure being delivered is enabling a full aerospace ecosystem to emerge within the precinct. SMEs can co-locate in a choice of buildings, and training facilities of the University of Newcastle and TAFE NSW will soon be integrated into a campus environment so vocational and tertiary studies can take place on-site.





4.1.3 Talent

Large anchors rely on locations that possess a dense pool of skills, as well as the liveability, character and authenticity that make it is easier to both attract and retain talent. In many science and technology sectors, this talent is extremely scarce, limiting the locations globally these anchors can shortlist, before considering other factors.

The upside is that a small number of cities can become synonymous as being the go-to locations for both talent and the businesses who need them, and in talent-hungry sectors, preferred precincts are often in well-connected urban environments where younger talent congregates in larger numbers.

The IPC's report, Global Talent Wars: Learning from locations that attract the best examines overarching factors that influence talent attraction and retention. Some of these factors (such as immigration and visas) can be influenced by government policies and programs, while other factors (such as language and location) are immovable.⁹⁸

Attracting the best minds to NSW is not easy. Compared with larger economies, NSW does not have the market size or scale to support the same level of specialisation as the US, which will always attract global talent. To compete globally for talent, NSW needs to deliberately target talent in the state's most competitive industries. This includes targeting Australians living overseas in these specialised areas, who bring with them more developed skills and connections to global sources of knowledge, capital, and goods — often called 'brain circulation'.⁹⁹

Talent is certainly a critical concern and differentiator for many anchor businesses consulted for this report. For precincts looking to attract significant anchors, especially in smaller locations or where there is a smaller domestic talent pool, this creates an urgency to secure a sustainable talent supply.

A common ambition is to attract an initial anchor which can attract enough talent to trigger a cycle of talent attraction, encouraging further anchors to participate. Phoenix partly achieved this with **TGen**, and **Amazon** did it in South Lake Union.

"Big brands come here due to the strength of the talent predominantly."

Avvey Peters

Communitech, Waterloo

"The kind of science we do in this town is difficult because it has never been done before. We need the best of the best."

Stéphane Bancel

CEO, Moderna, Kendall Square, Boston¹⁰⁰

Amazon's impacts in South Lake Union, Seattle since 2010 101

Number of jobs	50,000
Additional jobs indirectly created in the city	244,000
Estimated impact on city of every \$1 of Amazon investment	\$0.52

4.1.4 Brand and profile

Anchor companies are looking for their location to create flagship visibility to customers and suppliers. They see in an innovation precinct the chance to be part of a defined cluster with a geographic identity and shared sense of mission. They anticipate the wider international brand recognition that accrues from aligning with an innovation precinct that is already a household name in some industries.

Insights from the development of anchor tenant arrangements in London's Kings Cross precinct and Sydney's Tech Central suggest that anchors in technology sectors are often attracted by high standards of development aspirations, quality amenity, and the chance to be 'part of something bigger'— a once-in-a-generation transformation of a historic piece of city, or a location that sets new standards of sustainability, heritage, or social value. Commitment to highly connected hubs and high-quality public space can be a draw to attract and retain key anchor tenants.

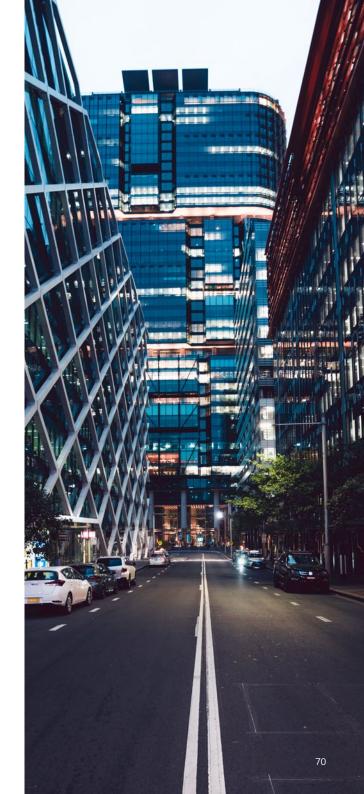
Accessing, communicating, and signalling to a firm's main customer base is a key consideration when a firm is considering precinct locations. In Sydney's Tech Central for example, a key requirement for fintech companies such as Afterpay is to be based in a location which is 'not corporate', to demonstrate a point of difference from a conventional bank and occupy a place that is reflective of its largely millennial and Gen-Z customer base. Places that have genuine urban feel, varied amenity, quality restaurants, and other cultural and recreational offerings are strongly preferred, while also being close enough to the CBD and being secure for those working late at night.

The brand edge that a desirable precinct offers also sees many precincts attract so-called 'proximate anchors'. These are anchors that are not based within the precise boundaries of the precinct but look to draw on the ideas, the place character, and the entrepreneurial environment — for example IBM and Datacom in Wynyard Quarter, Auckland (see Box 21). Finding ways to harness these organisations' innovation potential becomes a priority for precincts over time.

"They [the precinct leaders] have done well at building a brand and community that is a vision of the type of tenants they want to attract. This has created a strong mix of companies and given tenants the comfort to connect on their own."

Pete Abel

President/CEO, AbelCine (Industry City, New York)





4.2 Selecting the right anchor

It is common for international precincts to have a specific tenant mix in mind and to have developed selection criteria for incoming occupiers, even in situations where the precinct does not have the integrated land ownership or tightly coordinated governance to exercise top-down decision-making to engage anchors.

A clear appraisal process and, just as importantly, an ability to say 'no' are viewed as critical. Successful international precincts are known to curate the tenant mix, and to say no to professional services firms, for example, to preserve the innovation character, or to insist that a prospective anchor share the precinct's strategic objectives.

This international review identifies three approaches for precincts to 'select' anchors:

1. A go-getting approach to identify, attract, and recruit a very specific anchor. In a few cases, economic developers identify a very specific organisation or small group of eligible candidate anchors that will be capable of playing the kind of anchor role that the specific specialisation of the precinct requires.

This is the case in Jurong Innovation District, where the city Economic Development Board focused on convincing Hyundai that Singapore was committed to become a world leader and local consumer in autonomous vehicles.

- 2. Performance outcome criteria that form the basis for formal and informal discussions among prospective anchors. In this model, a precinct may be proactive in recruiting or soliciting bids and have a broad framework, including economic and non-economic indicators, for weighing up the merits of prospective anchors and the commitments they make for the future.
- 3. Shared objectives and codes of practice that encompass anchors as well as smaller tenants and startups. In these cases, the precinct leadership, local government, and partner developers broadly acknowledge and sign up to a shared vision and set of principles for the whole innovation community.

Here precinct leaders have observed that it does not make sense for the strategy and commitments to be just about one anchor. Instead, it is common to pursue a strategy for multiple anchors that complement the wider balance of companies and organisations already in the precinct.

Many NSW precinct participants observe the unexplored advantages in the third approach that can foster a sense of shared cultivation that innovation precincts thrive on — and a view that the innovation precinct is being developed 'with' partners rather than 'to' them.



4.2.1 Selecting anchors who carry out open innovation

Precincts succeed at growing the innovation capabilities of the whole ecosystem when they create the conditions for **open innovation**. Open innovation happens when the anchors and orchestrators support more decentralised and less predictable forms of entrepreneurship and value creation.

It is key for precincts to recruit anchors who see themselves as agents and catalysts for collaboration, business growth, networking, and investment into the whole innovation community, rather than simply seeing the precinct as a set of resources to generate profit from.

Anchor businesses engaged in **closed innovation** environments focus more narrowly on delivering a specific product or serving a reliable market — evaluating and selecting partners to work with from within their specific networks rather than from the ecosystem more broadly. While the anchor integrates trusted partner expertise and technologies into its final products, its motivation to support the ecosystem of firms around it is mainly driven to increase its appeal, scale, and scope of activities it oversees. Although this approach may deliver success and in certain situations may be preferred, it creates limited positive spillovers to local communities in terms of jobs, skills, capabilities, and social capital.

Figure 2 below illustrates a range of behaviour patterns of anchors, depending on how 'open' and 'closed' they are along this spectrum, also considering the scale of presence an anchor may have in a precinct.

Figure 2: Spectrum of common stances taken by anchors on their open/closed innovation approaches

Know your anchor types

Dominant physical presence	Profile-conscious, may be eager to show community benefits	Money to support precinct clustering is more philanthropic than core business	Localised procurement potential	Open to partnerships and joint ventures
	Want to access place amenities for themselves and staff	May be apathetic about place spillovers	Strong supply chain interactions	Reliance on and desire to support related companies to form
	See the precinct as a talent pool to be tapped	Leverage place brand for international growth and positioning	Seek like-minded organisations	Actively engage directly and through staff in ecosystem activation and engagement
Limited physical presence	Content to operate below the radar, seek few obligations	Interested in clear and predictable opportunities to share infrastructure and services	Eager for co-location, high level of proximity and porosity	Ready to provide intellectual value

Closed innovation approach

Open innovation approach



4.2.2 Distinguishing anchors' openness and appetite for innovation

There is no single litmus test to assess whether an anchor is committed to open innovation. As a result, precinct leaders and representatives look for several indicators to inform their decisions:

- Minimum thresholds of R&D/innovation staff.
 For example, Technoparc Montreal, a science and technology business park, requires all large companies in the park to have a minimum of 15 per cent of employees dedicated to research.¹⁰³ Others look for specific commitments about the percentage or number of global innovation heads who are based in the precinct.
- How networked the anchor's core business is.
 For example, they look at whether its specialisation relies on strong group networks, whether it works with small companies or primarily with large companies and customers, or whether its short product life cycle means it needs to work in a complementary way with others.
- How brand vigilant the anchor is. They examine
 whether its institutional mindset means it tends
 to be guarded and secretive about its brand and
 disincentivised to take risks. In these cases,
 the collaborative and 'shared success' mindset
 required to be part of an innovation precinct can
 be novel and uncomfortable.

- Familiarity and relationships with the wider city. The extent to which the anchor and its senior leadership have tangible linkages and reputation in the wider city, and in adjacent and even unrelated sectors, helps understand the extent it can add visibility and influence on the precinct. This is especially important in the case of less well-known locations where it is important to build ecosystem relationships and location credibility.
- Appetite for experimentation. In general, precinct leaders observe positive benefits that come when anchors willingly partner with others, are open-ended about outcomes, and understand that solutions come from experimenting. Enthusiasm for new initiatives for skills, placemaking, and technology trials, are important to this effect.
- A willingness and ideally some experience at being part of the shared governance of a precinct. This allows the anchor to participate more easily in the kind of collaborative environment in which innovation precincts thrive.

Where precinct leaders have capacity, it can also be important to educate and energise certain anchor leaders about their roles and responsibilities in innovation, building relationships over time that result in an outlook and commitment more in favour of open innovation.

"[When organisations] insist that others play only by their rules and do not engage in collective problem-solving, they become '800-pound gorillas' rather than anchors."

Walter W. Powell, Kelley Packalen and Kjersten Whittington¹⁰⁴

4.2.3 Complementing the anchors

Discussions with a wide range of precincts disclose that the clustering effect is often more powerful when precincts accommodate both public and private anchors. One academic study illustrates that having both public and private anchor tenants is likely to more than double the number of knowledge and business linkages in the precinct compared to having just one anchor. Other studies conclude it is "much more beneficial to have more than one anchor institution operating within a district."

This mix creates both knowledge and international commercial networks that can speed up the rate of innovation and support the participation of other companies. The success of one-north in Singapore and the Bioscience Core in Phoenix is credited to the careful selection of ambitious private tenants with suitable divisions of public agencies or laboratories and organising projects around their common interests.

4.3 Deal-making with anchors

There are a number of different 'deals' that are struck between governments, developers and anchors to secure their presence in an innovation precinct.

The precise terms of the deals are typically secret and commercially sensitive. While precinct place leaders do not regard deals as critical to the overall success of the anchor or the precinct, these negotiations are important in setting expectations, building relationships, and establishing a culture of partnership.

Internationally, the most common deals that involve anchors are with developer-landowners rather than with governments. Commonly these are standard real estate incentives — discounted rents and capital fitout costs — that are typically offered by developers in exchange for a commitment to lease. These tend to increase for longer leases and larger floor plans. However, in certain cases local or state/national governments become part of the negotiation, and in other cases, government is the landowner. This is the case for Sydney's Tech Central, which attracts scale-ups with subsidised rent and fitout.

"We have a contract in the back pocket, but we never refer to it. If you are pulling the contract out of the drawer [to raise underperformance], it means something has gone rather wrong and you have to revert to the core craft of building relationships."

Emma Frost

Director of Innovation at London Legacy Development Corporation and Chair of UK Innovation Districts Group





4.3 Deal-making with anchors (continued)

Incentives

The nature of incentives for anchors varies dramatically depending on how much the precinct relies on recruiting a particular specialist company, how much investment is required from the anchor or public purse into facilities and related infrastructure, and the anchor's time commitment to the place. Incentives are often a mix of time-limited extendable tax breaks, and R&D grants that can cover a share of the cost of developing a product or process. If public land is involved, it may include land at discounted rates.

"We knew what we wanted in our precinct and were guided by that. We prefer when it is arm's length with government."

NSW anchor tenant (anonymous)

Expectations

In cases where public money is involved, it is common for prospective businesses and institutions to face certain demands:

- jobs especially over a 5–10-year period, including a certain number of jobs of higher pay or seniority, and in some cases a percentage of jobs for locallyborn or under-represented talent
- headquarters designation, for example to name a new building a 'global headquarters'
- social engagement, including provision of open community events, contributions to education at school and university level, or commitment to commission a certain percentage of contracts from local SMEs
- environmental responsibility, for example to join a commitment to be carbon neutral by a certain date, and to avoid unsustainable purchases or contracts
- innovation agenda and culture of improvement within the anchor usually the anchor will be asked to articulate its ambition and be evaluated on it, rather than be measured on strict parameters
- limit on amenities provided in-house, to encourage
 the large workforce to be customers to local
 businesses and services. In South Lake Union,
 Amazon's buildings have dining facilities capable of
 holding only a third of the employees, to encourage
 workers to go out beyond the building and patronise
 local establishments.

4.3.1 Beyond mandates and rigid expectations

Place leaders note that deal-making arrangements must demonstrate very good public value for money and at the same time be flexible to specific circumstances. Building trust among individual anchor representatives and developing relationships with a smaller group of core stakeholders is key.

Clearly articulating precinct expectations and collaboration norms is important to build engagement, and is preferred to rigid frameworks that specify unrealistic targets or contributions. Some precincts draw on neutral intermediaries, such as inward investment professionals or ecosystem heads at local campuses or incubation programs, to help navigate this process.

4.4 Attracting anchors—roles for governments, place leaders, and anchors

Attracting the right anchors is a fundamental part of innovation precinct success. It is very important for governments, negotiators, and precinct representatives to become well versed in the motives of different kinds of anchors, adopt a clear narrative around innovation purpose, and develop a set of long-term strategic objectives that inform negotiations.



For governments

- Provide clarity and certainty about the infrastructure and development pipeline to engage and reassure anchors, and to de-risk the investments they make. Make sure that significant barriers to the location's viability travel time and choices, detachment from neighbouring locations — are addressed head-on.
- Ensure government is ready and integrated in bringing forward a precinct with the place quality to attract and retain leading anchors and the talent they depend on. This should consider questions of social infrastructure, variety of space, flexibility of land use in case anchors grow, and attention to the neglected aspects of placemaking which affect whether skilled people and graduates are willing to stay and build their careers in and around a precinct.
- Consider what other innovation infrastructure may invite interest — including translational research capability — to attract anchors to the wider R&D potential of a precinct and demonstrate that leading research can translate into business. This may include relocating assets into a precinct or consolidating assets so that there is a single facility with the gravitational pull for potential anchors.

- Invest in government capacity for honest and high-quality conversations with prospective anchors, whether during calls to market or other junctures, and establish a shared sense of opportunity around large-scale and long-term transformation. Look to understand the key motivating factors — talent, place brand, location, access to SMEs, and commercialisation potential.
- When negotiating with prospective anchors, focus on quality more than quantity. Strict demands placed on the number of internships hosted, classes run, or jobs created can be onerous and unrealistic. An innovation precinct relies on the quality of schemes and opportunities and collaborations. These in turn rely on high-quality partnerships between governments and anchors.



4.4 Attracting anchors — roles for governments, place leaders, and anchors (continued)



For place leaders

- Work on the whole place proposition. A precinct's vision and plan for the whole area is key to attract anchor tenants, rather than being pitched as a series of open plan buildings or wet labs waiting for tenants. Even in the short term it pays to build a sense of place, a whole brand, and perspective on how all the elements create the aggregated gains to sell the precinct story.
- Develop a framework to distinguish between anchors according to the presence of innovation functions, their collaboration potential with existing organisations, and demonstrable appetite for joint projects. Prioritise forward-looking anchors and continue to reach out to those — inside and out whose first instinct is "what's in it for us?"
- Match preferred anchors to the needs of the location in its current stage of evolution, given the existing composition of firms and the capabilities and readiness of other institutions to team up with the anchor. Avoid saying yes to the first opportunity if there will likely be a cost to the cohesion, complementarity, or culture of collaboration.

- Package up the opportunities. Create a portfolio of opportunities — sponsorship of events, apprenticeship schemes, community initiatives — to put in front of prospective anchors for them to be associated with and build their local profile and credibility.
- Welcome small teams in the precinct from leading companies based elsewhere in the region, so that the precinct assembles the best of what the region can offer in its target specialisms.
- Tread carefully. It is easy to strangle relationships with valued anchors by asking for too much or being too prescriptive. Often a 'softly softly' approach is more effective to understand their priorities and customise the response.

Table 3: Precinct insights

Common success factors for attracting anchors

Digital/tech precinct

Audit the place character for its urban vibrancy and talent appeal. These industries are increasingly sensitive to talent preferences and, after COVID-19, require an even higher level of experience to present a superior alternative to remote work.

Create the positive-sum environment for the anchor to give back. An anchor in this sector relies on government leadership to support a 'high-investment, high-return' outcome, which embraces investment in improvements to transport, density, housing, and skills in return for a significant uptick in jobs and productivity. Anchors are deterred by contexts in which they may be publicly blamed for their inflationary impacts and tend to be more proactive in a precinct where they have settled longer-term status.

Be vigilant to free riders. Large talenthungry companies often wish to be located in a precinct to to leverage the place brand, and so encouraging those who cluster in and around the precinct to become committed to something beyond businessas-usual is especially important.

Health and life sciences precinct

Bring relevant university departments and research institutes to the table in decision-making, given their essential role in R&D collaboration. Assess if any adjustments can be made to demonstrate the collaboration potential.

Be ready to host more of the value chain. Government must make sure it has the right set of spatial, education, and training policies so that a location is able to not only host labs and R&D, but also host related manufacturing in nearby campuses. This helps improve the potential inclusivity of the innovation economy by fostering a broader base of jobs for different skills and skill levels.

Look for crossovers. Anchors in this sector are increasingly attracted by and benefit from crossovers with technology, other sciences, and creative industries. Avoiding pigeonholing a precinct with one type of company and facilitating convergence are important.

Advanced manufacturing precinct

Demonstrating the appetite of other specialised players in the region to co-locate and collaborate is an important point of attraction given the tendency for advanced manufacturing anchors to be more dispersed or siloed.

Industry leaders and champions need to be empowered to influence the tenant mix of their precinct. Inspire industry leaders and champions with excellent industry/academia links to identify anchors with the right culture and gravitas that can move into the precinct.

Engage training providers and tertiary education in assessing the skills and experience gaps that inform how to attract anchors and what is expected of them.

Regional city gateway precinct

Encourage local anchors to relocate and co-locate to build critical mass. These should include cultural institutions and others that provide a depth of character and seriousness, communicating that the precinct is meaningful as well as efficient, and offer a genuine creative and intellectual milieu.

Empower local charismatic commercial leadership as well as city/university institutions to shape a fresh and compelling offer to anchors and to ensure the skills provision remains highly responsive to what anchors need. Leveraging the strongest elements of the wider city/region brand is important to selling the whole offer to a prospective international anchor that is less familiar with the location specifics.

Faster and more reliable public transport connectivity is often the biggest factor motivating quality anchors to choose this sort of precinct. This includes local light rail and buses to grow the effective size of the travel-to-work labour market, active transport options such as connected walking and cycling paths, and easy access to larger centres through high-speed solutions.

Box 23



Global waste solutions company to anchor Parkes Special Activation Precinct

Brightmark LLC is a US-based global waste solutions company bringing experience to the circular economy aspirations of the Parkes Special Activation Precinct. Brightmark employs scientific and innovative approaches to the transformation of waste and plastics renewal. This facility will be the largest of its kind outside the United States, diverting waste from landfill and processing up to 200,000 tonnes of waste plastics back into the market, creating import replacement products and assisting Australia to lower its carbon footprint.

Brightmark's investment decision process involved analysis of multiple international locations and working in partnership with both the NSW and Australian governments to determine the best location for the company in Australia. Brightmark expects to invest more than \$260 million and generate over 100 ongoing regional jobs in new skills areas.

Brightmark Founder and CEO Bob Powell said the company was excited to be expanding its waste solution footprint into Australia, setting the new gold standard in advanced plastic recycling.

"Collaborating with the NSW Government in their Parkes precinct is ideal due to the sustainablyminded business environment and community and its location as a transportation and logistics hub."

Bob Powell

Brightmark Founder and CEO

The announcement of Brightmark's operation in the Parkes precinct has been the trigger for a wave of investment enquiries from businesses that see synergistic opportunities to co-locate with Brightmark and provide a marketplace for their upstream or downstream material and energy resources. As a key anchor, Brightmark is expected to contribute more than \$3 billion to the broader regional economy with its flow-on effects creating new supply chains and development opportunities.

The Department of Regional NSW played a critical role in securing Brightmark's investment at Parkes. Over two years, the Department worked closely with Brightmark to understand its business requirements and to actively remove barriers as first movers into the precinct. Brightmark also received a \$2.7 million NSW Government grant through its Jobs Plus Program. This is in addition to the NSW Government's investment of \$185.4 million to kick off delivery of the Parkes precinct.

Construction of the facility will start in mid-2023 and it is expected to be operational by 2025. The Department of Regional NSW is working closely with local secondary schools, higher education institutions and training providers to ensure the local labour market will be well-positioned to benefit from the creation of new jobs. Skills expected to be needed include chemical engineering, process engineering, project management, and electrical and mechanical maintenance.

These efforts are in addition to the support offered by the NSW Government's Special Activation Precincts program, which has designated zones in regional NSW to become thriving business hubs to fuel economic growth and enable job and investment outcomes. Parkes is one of six NSW precincts under development, with other precincts in Wagga Wagga, Moree, the Snowy Mountains, Williamtown and Narrabri.

The precincts are being supported by government-funded infrastructure, streamlined planning pathways and a business concierge, to attract anchors and catalytic development that will generate an ecosystem of investment.

Each precinct has a unique value proposition for investment based on existing industry, environmental endowments, broader regional focus, and investment potential of the location.

The Parkes precinct has been earmarked as a sustainability and circular economy hub focused on freight and logistics, agribusiness, manufacturing, and critical mineral industries. The precinct will become Australia's largest inland freight and logistics hub, leveraging its strategic location at the junction of the east-west and north-south railway lines to attract businesses looking to take advantage of existing transport and logistics infrastructure.







Enabling success



International experience suggests that an environment primed for anchors to succeed relies on arrangements that are highly attuned to what anchors need and what anchors are needed.

These arrangements tend to work well when there is a precinct leadership and governance setup that allows partnerships to flourish, and where a strategy towards and on behalf of anchors can be followed through, creating confidence and continuity about the precinct.

"We view our role as an anchor institution....
as being even more important than it was
before COVID-19, and we continue to invest
in the physical spaces that are required
for realising the ambitions of the broader
Toronto ecosystem."

Meric Gertler

President, University of Toronto

5.1 Getting to grips with the goals and ground rules of anchors

Companies in a range of industries continue to value being part of innovation precincts and connected to their local innovation networks. During this research, many business leaders noted that precincts play an essential role in driving their business success and will do so despite COVID-19 increasing remote working in certain industries.

A precinct's density of clients and suppliers, as well as its physical character, sense of place, and shared story, can inspire those who lead and work in anchor businesses to be bold, innovative, and collaborative.

To make the most of a precinct's anchors, it is important to understand the financial, institutional, sectoral, and cultural aspects that will influence how likely they are to consistently contribute to precinct success.

Precinct and anchor leaders themselves point to four distinctive factors that influence an anchor's motives to actively participate in a precinct:

- 1. the duration and depth of the relationship with the precinct
- 2. the commercial and competitive imperatives facing an anchor
- 3. the distribution of the key anchor's innovation functions
- 4. the anchor's status in the regional market.





5.1.1 The duration and depth of the relationship with the precinct

Some anchors have a long-standing footprint and relationship with a precinct, dating back decades or centuries. Often these are universities or large industrial companies. They are highly trusted local organisations, valued as generators of knowledge and economic activity.

These anchors are interested in how a precinct can safeguard their brand and competitiveness (and in the case of universities their international ranking), while many also have a sense of purpose and mission about inclusive and innovation-led growth in the area. The University of Toronto in MaRS Discovery District is one such example where this mission is reflected across its senior leadership (see Box 24).

Long-term residency in a precinct does not automatically predispose an organisation to become an intentional anchor. Indeed, deep-seated inertia and inward-facing practices around co-location, collaboration and procurement can all be barriers. However, longevity does usually foster a sense of responsibility and means there is often some established capacity internally within an anchor to engage with nearby business and residential communities.

Other companies become anchors by growing rapidly within an emerging or active precinct. For example **Moderna** in Kendall Square has grown from one employee to 1,300 in 10 years due to its success in pioneering RNA vaccines and creating dedicated spin-offs.¹⁰⁷

Many other anchors arrive in a precinct as part of a relocation or international expansion strategy. In this situation it important to consider the motives to be in a specific location — whether the move was driven by a desire to innovate and build partnerships, or was merely for business growth.



Box 24



University of Toronto

In Canada's leading innovation precinct, MaRS, the University of Toronto is a leading example of a long-established anchor routinely stepping up to provide space for the startup and innovation community within and beyond its own immediate geography.

The university was an important tenant in the early phases of MaRS. For instance, it partnered with MaRS on advanced computing and data analytics centre ARCNet. In 2015, during a challenging financial period for the hub, it acquired four floors in one tower of the MaRS premises, as well as a 20 per cent equity share.¹⁰⁸

When the tower reached full capacity, the university took the opportunity to develop an innovation centre within the 400,000 sq. ft waterfront, a new destination for innovation for 3,000 tech workers. The university also collaborated with MaRS, state government and Johnson & Johnson Innovation to secure 40.000 sq. ft for a JLAB incubator.¹⁰⁹

The university's contribution to the precinct benefited from a 15-year government effort, principally at the province level, to make land use more flexible. This saw the relocation of relevant departments of state public health laboratories into the precinct, and encouraged more interaction between research and entrepreneurship, hospitals, and medical research institutes.

"University of Toronto sees itself as a primary anchor of Toronto's innovation ecosystem. If that ecosystem is going to expand to a different part of the city, then we want to have U of T's flag planted there."

Scott Mabury University of Toronto



5.1.2 The commercial and competitive imperatives facing an anchor

Large companies and established anchors are more likely to be take part in an innovation precinct if they are in a sector being disrupted by new technologies and breakthrough companies (see Box 25). For certain incumbent firms there is a recognition that high collaboration and reduced hierarchies within and between firms can help produce an environment more open to investment and international knowledge-sharing.

5.1.3 How key anchor innovation functions are distributed

Anchors, especially those in capital-intensive and deep technology sectors, tend to have their intellectual property (IP) tied to one place. Others have their IP more distributed, in multiple locations and spanning more of their key staff.

How IP is managed shapes the protectiveness of anchors and the extent to which they are willing or able to establish an open mindset that is responsive to the needs of the wider precinct. Demonstrating willingness to reduce IP barriers is an important step for many institutions taking part in an innovation precinct.

University of Cincinnati is an example of an institution that actively addressed IP barriers. It established the 1819 Hub at the heart of its medical innovation district, set up a corporate relations team to make it easier to access university resources, and eliminated most IP barriers. To further support the innovation ecosystem, state R&D grants were provided to companies who operated from the hub and were willing to grow their innovation teams.¹¹⁰



Box 25



Takeda — a life sciences anchor internally disrupting its own role in a precinct

In the Tokyo region, pharmaceutical company Takeda has been under pressure to develop more home-grown technology not obtained through acquisitions. The firm recognised it could increase the rate of drug discovery and international networking if it cultivated a flatter ecosystem and became a less dominant player in Shonan Health Innovation precinct. This precinct is one of Takeda's two most important sites in its global R&D footprint.

To encourage open innovation and more fluid partnerships with inbound international companies, Takeda decided to hand ownership rights over 23,000 m² of land to a third-party trustee and signed a 20-year lease agreement instead, introducing new on-site and virtual overseas membership options.¹¹¹

This shift allowed local firms to use shared spaces, access consulting services, and connect purposefully with firms moving into the Japanese market. With 20 organisations and individuals participating in the precinct as non-occupants, partnerships with global universities, and a breakthrough for a world-leading narcolepsy drug, Takeda's commitment has attracted more diverse life sciences players and supported the firm's quest for resilience.¹¹²



5.1.4 The anchor's status in the regional market

An anchor may be a dominant player in a home market or a new player in a secondary market. This can affect the way the anchor sees its role and time horizon in a precinct. Companies that are clearly the dominant player often take a long-term view (see Box 26). They have the financial and social capital, as well as the reputational advantage, to develop precinct-wide programs and infrastructure.

By contrast, for companies establishing a new branch or regional headquarters as part of a planned growth strategy, there can be limitations in the extent to which they can participate in disruptive innovation. Often the teams with a presence in the new market are more focused on business development while many technical specialists are based at global headquarters or other R&D specific hubs. These branches or subsidiaries may also require permissions before they can decide or participate in an opportunity, impacting their spontaneity and risk-taking.

"The provision of various online services did not seem to enable a break from the requirements of physical co-location to achieve the intended outcomes... the success... of these online tools is underpinned by the co-located activities"¹¹³

Tim Minshall and Letizia Mortara University of Cambridge

5.2 Creating the right environment for anchor and precinct success

5.2.1 Providing space to grow

Many anchors come up against space constraints as they grow, especially when their future needs are not part of the decision-making equation. They rely on adaptive land use planning to allow for a mix of uses and potential changes in use over time.

Inflexible zoning can be a major obstacle in precincts where anchor tenants seek to build their presence and influence over time. At the same time, ensuring that a precinct sustains an effective mix of uses over time and does not lose its vibrancy and character, is important to ensure that other companies are able to co-locate alongside the anchors and find the overall offer compelling.

MIT is an example of an anchor that has consistently played a key role in the physical development of its innovation precinct. Having triggered the rapid growth of high-tech companies in Kendall Square, in 2017, MIT submitted a rezoning petition to redevelop a small (0.05 sq. km) but strategically located land parcel within the wider precinct. This redevelopment includes new headquarters for the Volpe Transportation Centre, as well as housing, commercial and lab spaces, public open spaces, and a community centre.

The aim has been for a much more mixed development that is more accessible by multiple modes and activates the ground floor spaces. As part of the rezoning agreement, MIT has also committed to developing a new 500-bed graduate student residence hall and designing, building, and maintaining a multi-use community path.

Box 26



Telefónica in 22@, Barcelona

For 20 years, Spanish telecom multi-national Telefonica has been a key player in the growth of the mobile technology cluster of 22@, northeast of Barcelona's CBD. As a former state-owned monopoly, it was the biggest player in its home market and was seeking to tap into the tech startup scene to develop a broader base of services in international markets.

In 22@, Telefónica founded a large R&D division, one of six worldwide, to invite thinking-out-of-the-box innovation. Over time it has made a series of important contributions to grow the precinct's profile and collaboration potential while serving the wider city.

Arriving while the 22@ district was still emerging as Barcelona's main technology-focused innovation precinct, Telefónica invested up to €200 million in its Catalan centre, with 200 core workers. It became an active part of 22@ Network, an association of precinct member companies and institutions shaping the precinct's cluster specialisms.

In 2011 Telefónica decided to grow its presence and chose to occupy a large portion of one of the most iconic buildings in the precinct, Diagonal Zero Zero. It invested more than €100 million to purchase the leasehold and establish collaborative workspaces to house up to 1,200 employees. It also opened two ground floors for auditoria and technology demonstrations. The lease agreement it made in 2011 with the building's construction company — the publicly funded Consorci de la Zona Franca de Barcelona (CZF) — included a commitment to occupy the building at least in part until 2060.

As 22@ became more established and active as an innovation precinct, Telefónica started investing in the startup community and other business partnerships, motivated in part by the arrival of other large firms such as Cisco and Schneider Electric. It established Wayra—a business incubator—to support 12 projects each with €49,000 and access to the 22@ Diagonal Zero Zero tower for six months to execute ideas.¹¹⁵

Telefónica also played an instrumental role in establishing Barcelona's Mobile World Capital initiative (in a bid led by the city's economic development agency, Barcelona Activa), to drive innovation through digital entrepreneurship. This led to Barcelona's annual Mobile World Congress becoming arguably becoming the world's leading mobile telephony event.

More recently Telefónica created Alpha in 22@, a so-called 'moonshot' initiative to forge links with leading startups and entrepreneurs in the district outside its immediate areas of expertise. The purpose is to identify and bring to market disruptive technologies and business models on everything from blockchain to health tech to off-grid energy to Internet of Things to neuroscience.¹¹⁶

Alpha operates as a semi-autonomous unit with its own governance structure. One idea is chosen and funded each year as a 'moonshot' with a 5-7-year plan. Telefónica observed that unlike other corporate R&D endeavours, it needed to empower and resource real experts with proven entrepreneurial skills. Telefónica in effect has been an arm's-length shareholder to Alpha, providing patient capital.





5.2.2 Sincere community buy-in

Over time, anchors increasingly observe their role is to ensure that community needs — both innovation and inclusion — are at the forefront of future strategies. Public anchors, especially, have taken the time to pursue outreach, educational programs, and conventions to build buy-in from the community and make the case that growth will serve the wider city.

Some — such as the Francis Crick Institute in King's Cross London — support or sponsor community liaison committees. Others — like Vertex in Boston — expand their careers and talent pipeline commitments. Among more conscious and strategic anchor tenants, their focus is on improving the social outcomes from their spending. Many — including UPenn in Philadelphia — have found that to deliver these changes they need new policies and functions to reward students and staff who are giving back to the community, and to foster a continuous improvement culture in the anchor itself.

"Commercial R&D is very hard, and it can be even harder if driven and run by a university."

Financial Director

Anchor university, UK (anonymous)

5.2.3 Anchors contributing to broader precinct vision

An anchor that fully recognises its influence in a precinct is key. Many interviewees discuss the need for the culture of the dominant anchor to focus on the wider precinct journey. For example, the work of a university can be a challenge if it is a dominant landowner or tenant in an innovation district. Many are used to instinctively prioritising core facilities for academic use and student housing, and relying on agent-to-agent transactions, despite the essential role of curating commercial co-location.

One way an anchor can explicitly contribute is to communicate clear objectives about its own innovation goals within a precinct. A road map can provide confidence and clarity to other precinct organisations by outlining what an anchor is seeking, what problems it is looking to solve, who it can work with, and how.

In 2019 BT Sport, the BT Group division that anchors the Queen Elizabeth Olympic Park Innovation District, London, created an innovation roadmap laying out its path into new broadcast technologies and product delivery to stay competitive. This public document allowed partners in the wider innovation district as well as others in London to understand the direction of the company, what its innovation needs are, and the opportunities to work with them.

In Sydney's Tech Central, the Camperdown-Ultimo Alliance of anchors, including the University of Sydney, University of Technology Sydney, Sydney Local Health District, as well as the City of Sydney and Inner West Council, have played an important role since 2018. This coordinating initiative has helped shape a wider common vision, broaden the recognised definition and geography of the precinct beyond the immediate development opportunity, and build a clear set of priorities for how to connect key parts of the precinct physically and digitally.

One way that anchor UTS is increasing visibility of innovation and creating connections across Tech Central is its UTS Startups @ Central initiative. The university is utilising its high-visibility real estate on one of the busiest street corners in Sydney to inspire new startups and accelerate the activation of the precinct.

Once the UTS's Co-op Bookstore, the space now showcases the products and services of the university's community of 500 technology-enabled entrepreneurs. Each week a different startup is profiled in the space, providing a valuable customer engagement opportunity. The space invites the public in to expose them to the stories behind the tech entrepreneurs, and also encourages others to take their first entrepreneurial steps, thereby enabling an increasingly vibrant and self-sustaining precinct.

As in other precincts globally, such approaches have fostered a cultural shift among the participating anchors towards a spirit of collaboration and a common endeavour, mapping existing knowledge and cultural linkages as well as attracting more businesses to co-locate. These kinds of initiatives tend to endure and expand when there is a durable revenue source for significant collaborative capacity.



5.2.4 Establishing appropriate precinct governance

Anchors benefit from collaborative governance that bring anchor leaders into strong relationships with public decision-makers and other key stakeholders. Good governance creates clear plans, confidence, and identity, and with it a sense of purpose and attachment for anchors.

The willingness to co-organise and participate in governance is observed even in highly mature innovation precincts, such as Kendall Square. In Kendall Square, MIT via an Association provides a voice for the precinct, promotes it both nationally and internationally, and plays a leading role in meetings with other anchors and investors to discuss future expansion (see Box 27).

Johnson & Johnson in Leiden's Innovation District, in Holland developed a leading role over the last 10 years, in a research-intensive environment.

While in developer-led precincts, informal governance is often important, underpinned by transparent leaders who craft a shared vision and high levels of participation. For example, film and media services company **AbelCine** in the developer-led Industry City innovation precinct in New York, its success has been attributed to the trust and shared capability with other like-minded media-related organisations: "we've developed very close relationships based on the premise that the more we collaborate on projects together, the more we'll help each other succeed and grow". 117

In most cases, the coordination model within the precinct also depends on a high level of commitment from city (and state) leaders in favour of the precinct and its long-term goals.



Box 27



MIT, Kendall Square — more proactive anchor roles in precinct governance

Interestingly, Kendall Square has emerged as one of the most innovative neighbourhoods on the planet without the benefit of strong governance, or active state government leadership. Yet soft governance has been developing over the last decade to coordinate development and priorities more effectively.

MIT became a founding member of the civic and business development organisation, Kendall Square Association (KSA) in 2009, and now holds three of the five positions on its executive committee. The KSA has emerged to help attract talent and manage growth in the district to create jobs and increase the tax base, while responding to community needs.

As MIT is a key player in the precinct, it plays a core role in the KSA's task force on the future of work in Kendall Square after the pandemic. It ensures a high degree of alignment between KSA and MIT on the Inclusion Drives Innovation program, which complements MIT's own Strategic Action Plan for Diversity, Equity, and Inclusion.

MIT in effect has become a galvanising stakeholder, allocating significant time of four senior staff — the chief communications officer, officer of government relations, campus planner, and real estate managing director. These help to hold community meetings about plans for the east and west campuses, contribute to non-profits in and around the precinct, and launch feasibility studies regarding the use of university-owned property to create new community infrastructure.¹¹⁹

"I would like Kendall Square to be a place that never forgets the source of its strength: a great system of mutual inspiration, support, and collaboration, stretching from fundamental science all the way to practical impact — a system that embraces absolutely everyone in this room today."

Rafael Reif MIT President



5.2.5 Agile and capable intermediaries can help support anchors

High-quality intermediaries — professionals recruited for their networking and coordination skillset — are key allies that can help convene anchor businesses and help them make decisions and sort out issues that arise. An intermediary can provide a single point of interaction between the anchor and a more politicised precinct leadership, helping to manage the relationship.

These intermediaries may be employed by anchors themselves, or by the precinct leadership body, or they may sit within a larger economic development agency working alongside others providing similar functions in other precincts. Either way they are trusted as independent liaisons who keep track of innovative projects, incoming arrivals, outbound trade missions, and have a primary responsibility to connect people and help partners solve problems together. In some precincts these people will have communications and PR specialisms. In others they will have event management capability to bring together like-minded teams and individuals in a precinct in creative ways.

In Auckland, a 10-person team at the 3-building campus **GridAKL**, employed and funded by the public economic agency Auckland Unlimited, including through user revenues, has proven highly effective in the Wynyard Quarter precinct. They work across a complex web of public and private partners to activate the wider area, working on placemaking, anchor attraction, and events and activation.

The highly capable and dedicated staff, and an accessible ground floor at GridAKL create an open environment and a high level of interaction between neighbouring tech businesses and the business community. The result has seen this area become a central meeting point for entrepreneurs and anchors in Auckland's innovation ecosystem, with several nearby corporates establishing startup accelerators offering more widespread access to services, advisers, and funding sources.

"You can do an awful lot without the physical infrastructure to get the big companies energised — through programs, charters, and trying to articulate the different responsibilities that exist"

Place Leader

Grand Canal Innovation District, Dublin (anonymous)



5.3 Enabling success—roles for governments, place leaders and anchors



For governments

Government can play several key roles to optimise the overall effect that anchor businesses and institutions can play in the evolution of NSW's innovation precincts. Government can:

- Co-fund innovation and cultural infrastructure (research institutes, cultural spaces) that provide the rich environment that attract anchors and make the most of the impact of their presence.
 It is important that government does not assume these additional pieces of a precinct jigsaw can initially be left solely to the private sector.
- Act as convenor to give an innovation precinct a regional and national mandate. Build on the platforms created by institutions, businesses, and local governments to give priority and shape to the precinct vision. Government can accelerate a precinct's development by de-risking the place for developers and anchors alike.
- Create the governance flexibility for anchors to connect into a precinct and help shape precinct operations and strategy. Use influence to encourage anchors to open their global networks.
- Regularly endorse precincts to create momentum and profile, helping to create an environment in which anchors are reluctant to leave or to disappoint. Government can use its significant influence here.

- Maintain pro-anchor macroeconomic policy for example, around tax credits, visas for employment, and other needs for large, agile, talent-reliant organisations.
- Be open to reforms for example, reforms to the way higher education is funded, regulated, and incentivised to be enterprise-oriented. This can help organisations consolidate to create critical mass, achieve more scale, aggregate performance, and become more internationally prestigious.
- Avoid adoption of a single anchor model.
 There is always a risk government innovation policy approaches become too oriented around supporting the innovation model favored by a small number of anchors (such as technological R&D), at the expense of other tools and approaches (such as those led by the enterprise or by services).
- Don't underestimate the importance of investing in placemaking, improving liveability, connectivity, and growing a sense of place.





For place leaders

The responsibilities for those in government and place leadership to organise and deliver a vision for an innovation precinct, are principally about building capacity and coordination so that the choices to bring in an anchor and then work with them are joined up and prioritised.

- Think long-term. Work on a minimum 10-year time scale when thinking about what an anchor can deliver and invest in the whole place to allow it to succeed.
- Know your anchors. Learn the differences between different types of companies and institutions, their contexts, motives, and opportunities to engage and attract them. Become well versed in the time horizons of anchors, and be alert to the windows of opportunity for relocation or aggregation.
- Look to give anchors credit. Precinct leaders must 'shout from the rooftops' about anchors' early success stories and contributions and encourage senior political leaders and media to be vocal and supportive.

- Invest in continuous diplomatic capacity. The
 hardest challenge can be the suspicion among
 existing or prospective anchors about 'what's
 in it for them'. Activating them requires patient
 and often long-term relationship-building and
 community-building skills which can mean
 hiring people who have credibility in startup/
 scale-up environments as well as familiarity with
 the real work of the local innovation community.
- Use the platform and profile of an innovation precinct to your advantage. A very clear mission and compelling vision of the precinct will attract anchors and inspire them to deliver on it.
- Develop collective leadership so that anchors can participate and lead in a wider range of programmes and build a wider and more organic set of obligations in the precinct.
- Avoid over-reliance on collaborative projects and programs solely with anchors at the expense of projects that can enlist or empower smaller firms.
- Don't forget to engage with nearby anchors
 whose activities may impact the brand and
 direction of the precinct even if they are outside
 formal boundaries.



For anchors

Whether an anchor is already in a precinct or considering a relocation opportunity, there are specific adaptations that can enhance the impact on the organisation and the wider ecosystem.

- Recruit entrepreneurial team members who can see possibilities of the precinct and have the capacity to work fluidly across different levels of leadership through the anchor.
- Ensure strong coordination between the anchor real estate team and precinct to ensure effective planning and integrated development. Stay directly involved in the management of open innovation that is put in place. Avoid becoming one degree removed from potential users of the open innovation infrastructure.
- Adopt a permanent and continuous innovation mindset at mid-tier level, creating incentives for more staff beyond senior leadership to mainstream innovation, and opportunities to engage in time-limited working groups and other challenge-based activities in a precinct.
- Communicate clear innovation goals within a precinct so that government and precinct leaders can engage helpfully and others in the ecosystem can join into larger missions.
- Create visible and clearly delegated partnerships with other anchors and larger organisations to pool and scale commitment around workforce, procurement, placemaking and precinct profile.



Table 4: Enabling success over time: Priority actions for NSW innovation precincts

	Planned precinct	Emerging precinct	Active precinct	Globally significant precinct
Attracting anchors	Verify the precinct's real strengths and credibility. What are its authentic world-leading capabilities, and the market drivers to attract an anchor? Find out what specialist talent and business really think about the precinct. Discover the missing capabilities in the local sector/ ecosystem that anchors or other specialists and convenors might fill. Audit the existing larger players for innovation activity, collaboration, and strategy to harness the potential of the knowledge they produce or consume.	Ensure the essentials of land use planning, masterplans, and initial infrastructure and basic amenities are in place. Identify and equip the precinct's catalytic stakeholders and charismatic champions with the tools and story to sell the precinct to prospective anchors. Those with the biggest address books and the highest ambition can be key to sounding out potential prospects and promoting the opportunity.	Proactively diversify to avoid a single anchor becoming too closely tied to the fortunes and profile of the precinct, creating dependence, and increasing the precinct's resilience if the anchor or wider industry is disrupted. Look for new anchors that explicitly complement existing anchor(s). Use existing anchors — their brand, their leaders, events, and global networks — as primary vehicles to attract the interest of the next generation of anchors.	Continue to enable the innovation precinct capacity to expand to accommodate more anchors and not to become constrained or unaffordable. Adjust the precinct's spaces, amenities, and mobility to respond to newly changing preferences of talent. Use the precinct success and global visibility to unlock demand from anchors for other locations, neighbouring and further afield, by preparing other quality locations that are well aligned and share similar narratives.
Appraising and deal-making with anchors	Alignment anchors, making sure they fully reflect the long-term precinct vision/strategy. Develop strategic objectives for all incoming tenants to align with. Review the anchor's track record in innovation precincts and clusters internationally. Assess anchor's level of participation and partnership appetite according to international and industry standards. Seek out view of leading national and international incubators and industry convenors.	Avoid risk that first big anchor becomes perceived as heavily or unfairly subsidised; this invites protracted scrutiny and reduces social buy-in. Consider roles and responsibilities for the anchor in master planning, placemaking, and district development. Start to convert shared aspirations into commitments for anchors to open global networks and commit to local procurement.	Get ready for motivation of anchors to change over time, due to changing circumstances, strategies, and opportunities for mergers and acquisitions. Look for willingness to co-invest in successfully established schemes, and to commit capacity as well as money. Create more independent scope for negotiation and partnershipbuilding with the experienced precinct leadership team.	Renew and diversify the anchor commitments. These may be philanthropic endowments, joint capital investments, new ways to open the anchor to the community, sponsorship of education or social infrastructure. Embrace more cross-pollination of anchors including in more established sectors as the scale of innovation demands a wider variety of capabilities (such as professional services or the visitor economy).



Table 4: Enabling success over time: Priority actions for NSW innovation precincts (continued)

	Planned precinct	Emerging precinct	Active precinct	Globally significant precinct
Optimising anchors	Develop a wider precinct strategy that goes well beyond anchors and considers economic, social, and physical components. Consider potential for a public anchor/hub to provide initial momentum and demonstrate precinct commitment. Start to build a strong customer relationship management function in the precinct.	Build collaborative capacity among place leaders and anchor leaders. Consider role for anchor in precinct governance arrangements. Assess and improve the precinct's planning flexibility for anchors' impact on housing, space, amenities, and social infrastructure. Prepare grow-on space for firms benefiting from anchor presence. Engage closely with landowners and developers to ensure a shared approach towards the kind of anchors catered for and a pursuit of non-conventional character and mix of development.	Monitor performance. Invite to working groups engaged in enterprise and community programs. Develop deep and enduring individual relationships between precinct leadership and anchors out of which new commitments can arise. Create the place affiliation among anchors by ensuring the precinct is well programmed by highly capable network-building teams and public space animators.	Prepare for the unintended consequences such as the housing, skills gaps, affordability, and new environmental requirements. Consider if anchor technologies and innovations can be applied to local challenges. Reassess whether anchor locations can support a re-distribution of jobs in the wider region, and whether other parts of the value chain (such as production/sales) can be accommodated to create more inclusive jobs. Use anchors' established reach and global excellence to host and convene innovation leaders from around the world and develop Sydney/NSW's reputation for discovery and problem-solving.



Table 5: Precinct-specific insights

Common observations on shaping successful anchors Regional city gateway precinct Digital/tech precinct Health and life sciences precinct Advanced manufacturing precinct Tech anchors are often most creative in Ensuring the anchor is either at or Make sure there is R&D expertise Develop a strong innovation story of their commitment to local startups and to develop and de-risk industrythe wider city/region, including the next to the precinct centre of gravity legacy of knowledge and the wider commercialisation when given latitude is especially important given the transforming solutions. A mix of and choice to shape their contribution privacy and IP requirements reduce public and private anchors is usually set of assets, not only of the specific as part of a high-trust partnership with natural 'contact time' among those an advantage. location strengths. local leaders where the wider mission based in the precinct. A single site of services, training, and Existing university and knowledge has been clearly communicated. anchors must be at the core of precinct Volume and flexibility of space to shared technology/equipment can be Impacts on talent and housing mean contribute to rapid scale-up is a major important to bring anchors and SMEs development and knowledge exchange. that anchors' 'social license to operate' factor given the pace of growth for together. Avoid sites being to spread as well as future anchor attraction. is especially important to agree and get many anchors in the sector. out or poorly sequenced to prevent Make sure incoming anchors bring right. Commitments to apprenticeships, anchors from partnering purposefully. A younger and urbanising talent base value to place brand and visibility academies, community liaison, and in means a 24/7, transport-rich urban Dialogue should focus on an anchor's even if not initially committed to being some cases affordable housing are environment is required to attract more ecosystem engagement and actively engaged. all relevant. Anchors also value the contribution to local SMEs. leading players. capacity and willingness to insulate them from politicised criticism or unwarranted controversy. Authentic development, quality of public space, and space of varying sizes and price points are all essential for a precinct in this sector to command the attention of talent that anchors rely on. Anchors seek be part of something bigger and more meaningful, and the calibre and identity of the precinct environs must be as high as anything in the region.





Opportunities for NSW

The right anchors in the right circumstances can create new jobs, encourage suppliers to innovate, attract capital and talent, connect small businesses to global markets, and accelerate investment in R&D, infrastructure, public space, and shared amenities. But every anchor and precinct is unique, these benefits can vary greatly, and they are not guaranteed.

Some places do better than others at attracting anchor businesses and institutions. And some places are better again at maximising the benefits that those anchors can provide.

We are still developing our knowledge of why some businesses and institutions are better at building a coalition of active participants and champions. But we know enough to learn from experiences around the world to focus and enhance our efforts in NSW.

Importantly this research comes at a crucial tipping point. Across the state, NSW anchors are becoming more 'precinct-conscious' and precincts (and their leaders or government sponsors) are becoming more 'anchor-conscious'.

At the same time, the NSW Government is actively investing and supporting innovation precincts through Investment NSW, the Greater Cities Commission, and government-wide initiatives such as the Greater Sydney and Central Coast Precincts Strategy, and Special Activation Precincts. It is also improving R&D collaboration through the Accelerating R&D Action Plan, and NSW 20-Year R&D Roadmap, and building the talent pipeline through initiatives such as the Entrepreneurship and Innovation Ecosystems Action Plan.

These significant initiatives are providing the investment and enablers for NSW precincts to be more innovative and productive — places of economic development and job growth.

While there is much happening in NSW to support and foster innovation precincts, this research identifies that our biggest challenge in NSW is to incentivise and enable our anchors to shift from primarily being users of the place to becoming more active participants in and champions of the precinct. This shift will require a long-term commitment, stronger curation of the tenant and occupier mix, shared improvements to the quality of amenity and place, and a deepening and widening of existing collaborative practices.

More can also be done to attract the right R&D-intensive anchors, develop longer-term anchor strategies, invest in precinct leadership and governance, and encourage anchor mindsets. These efforts will help us accelerate the benefits from the significant public and private sector investments in innovation precincts.

The IPC makes four overarching recommendations to help NSW innovation precincts and anchors further succeed. While the IPC's recommendations are for NSW Government, it is intended that the goals and delivery will be shaped together with anchors and partners. Specific roles and responsibilities may change depending on the unique circumstances of each precinct and its governance structure.

Image: UTS Toby Burrows 2020-2025





Build a cohesive innovation story for NSW to attract R&D intensive anchors

Sydney is a globally recognised top-tier city. But to maximise reach and appeal to prospective global R&D-intensive anchors, the needs to sharpen its innovation brand and story. It needs to present a single, unified narrative rather than a discrete set of property-led or infrastructure-enabled projects. This story needs to include NSW innovation precincts as part of the wider regional proposition.

To build a cohesive innovation story and attract R&D-intensive anchors, the IPC recommends the NSW Government:

- a) Further build and sharpen the wider Sydney and New South Wales innovation brand to maximise reach and appeal to prospective anchors, especially internationally.
- b) Promote innovation precincts as part of a wider regional proposition and story that is communicated as a single and unified set of ideas, rather than a discrete sequence of property-led or infrastructure-enabled projects.

- c) Ensure the innovation story is matched by the product, by bringing forward more high-quality, high-amenity locations with flexible and affordable space, cultural character, and life on the streets, that together present more choice for fast-growing anchors to expand into more areas of NSW.
- d) Ensure coordination of precinct strategies so that each location has clear specialisations and value propositions, and to avoid competition among NSW precincts for the same anchor.
- e) Use existing anchors to champion and grow the profile of precincts, to further attract businesses and investment.



Co-design long-term anchor strategies that are tailored for each precinct

Many international companies in NSW precincts focus on marketing, legal and regulatory affairs. Some do conduct downstream research such as clinical trials, and contract research. But overall, NSW is missing out on the benefits from world-leading companies with locally rooted technical capability. These international companies are often attracted by the proximity to a supply of university graduates and are not used to dedicating sustained attention and capacity to the networks that make up the local ecosystem.

While the NSW Government is proactively sourcing commercial partnerships with industry partners and research organisations to deliver key precincts, NSW precincts need to be more intentional about attracting R&D-intensive anchor companies that can create the necessary innovative catalyst. This needs to be done as precincts consider the whole tenant mix they wish to create, as well as the cultural amenity, inclusive public space and street life that sustains it.

To achieve this, the IPC recommends that the NSW Government in collaboration with precinct leaders develops long-term anchor strategies that are tailored for each precinct and that focus on curating the whole precinct.

These individual precinct strategies should:

- a) Consider the preferred tenant mix in the whole precinct, including the balance and profile of stakeholders and development of an innovation ecosystem.
- b) Assess the appropriate anchors to attract for the stage of precinct development, mindful of the specific innovation potential of each precinct, from new initiatives to established 'success stories'.
- c) Take a curatorial rather than ad hoc approach for multiple anchors, informed by strong market intelligence and understanding of anchors' motivations and needs.
- d) Develop qualitative measures for successful anchor attraction and move away from a pure numerical measure of securing anchors. Avoid an overly prescriptive or inflexible, top-down or 'them and us' approach to deal-making.
- e) Incentivise long-term engagement for incoming anchors and opportunities for them to make many contributions to innovation ecosystem development.
- f) Provide clarity and certainty about planning, infrastructure, and development pipelines to signal to the market long-term commitment and stability, thereby encouraging private sector investment.



Invest in precinct leadership and governance to support quality partnerships and collaborations with anchors

This research has found low crossover (or 'porosity') between different kinds of organisations, and limited circulation of talent in NSW. This has led to differences in outlook which make collaborative ventures within a precinct harder to craft, and to a tendency to look to government as the catalyst.

It has also found that sustaining promising networking initiatives and projects that involve investment of money or time has proved challenging at times in NSW. Ideas tend to rely on government finance or university leadership to endure, while established anchors are not typically well embedded into precinct strategy building.

To increase the crossover between anchors, corporates, and SMEs in NSW precincts and better embed anchors into the decision-making and strategy-building, the IPC recommends precinct leaders:

- a) Establish dedicated and sustained leadership and governance structures that are fit for purpose for each precinct, and which can develop and execute an anchors' strategy.
- b) Ensure all partners plan for a process of five years or more for precinct development and avoid programs that are limited in length or scope to encourage continuity and business confidence.

- c) Invest in the capacity and skills of precinct leadership to help build lasting and versatile relationships. Recruit teams with senior experience in high level relationship management and innovation community-building, so that expectations placed on anchors are freely made and mutually motivating. Ensure dedicated relationship management teams are given the capacity to actively manage relationships, including supporting continuity of relationships. This is particularly important in government, where regular changes to personnel and organisational structures are commonplace.
- d) Where government is primarily driving precinct development, there should be a transition plan. Successful precincts are led and developed by the residents and tenants of the precinct, including its anchors. Government leadership should be built with the intention to collaborate closely with industry and institutions, so that as the precinct matures, all participants can contribute to its long-term success. This is also important so that if government steps back from the precinct, stakeholders will be able to continue to implement the vision.
- e) Establish mechanisms for cross-precinct collaboration so that precinct leaders can more easily share knowledge and resources and minimise duplication.



Encourage anchor mindsets to help shape the long-term success of precincts

In many NSW precincts it is not always clear or widely acknowledged who the anchors are. Established institutions or long-standing businesses located in NSW precincts do not necessarily perceive themselves to be anchors or have a strong sense of the expectations that come with being an anchor.

These 'invisible anchors' are unaware of the opportunities around joint research, brand-building, and applied networking among different staff groups that they can champion and benefit from.

The IPC recommends the NSW Government and precinct leaders proactively encourage anchors' mindsets and raise the confidence and appetite among 'invisible' anchors, so that they become more active participants and help shape the long-term success of NSW precincts. The IPC recommends the NSW Government:

a) Encourage diverse collaboration between existing anchors in precincts to build high-trust relationships, to pool capabilities, and to co-invest in the precinct's success.

- b) Build deeper connections and clear two-way communication between government and the coordinated partnerships that form between universities, R&D intensive firms, and other representative groups.
- c) Fund roles or organisations to implement programs and initiatives which encourage collaboration and connections between the precinct and the broader ecosystem and community, including:
 - outreach and awareness-raising to emphasise the role anchor businesses and institutions can play in partnerships, and to build a shared identity which facilitates trust
 - leadership forums and events, networking and learning opportunities, internships, and coordination programs which support areas most critical to precinct success, such as developing an innovation ecosystem, commercialisation, specialist skills, procurement, and place management



Encourage anchor mindsets to help shape the long-term success of precincts

- co-designed initiatives which foster collaboration between industry and research institutions, such as innovation 'test beds' in the precinct, as a destination to attract and grow talent and connections between researchers and entrepreneurs and the anchor businesses
- open up spaces for broader stakeholder and public-facing activities such as ground floor areas to showcase precinct innovation and artists
- initiatives which support collaboration between businesses, for example in market intelligence, product design, product promotion and branding, technological insights, and workforce development, including skilling programs for SMEs to support their capacity for relationship building and management.
- d) Develop an agreed definition of success for anchors and for the precinct that includes a strong focus on shared prosperity and 'whole place' benefits. Measures of success should include tangible outcomes and mutually agreed reporting mechanisms.

Appendix

International anchors and precincts reviewed and interviewed for this report

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
22@, Barcelona	Telefónica	Private company	Telecoms/ cyber	2002 — Emerging precinct	Globally significant	R&D Centre (cyberoperations, critical incident control)	Access to talent, proximity to universities, visibility to CBD customers, collaboration with tech peers.	Co-invest in technology, flagship social space, entrepreneur support, technology specialisation, attract tech investment, sub-lease to tenants.
BlueGate Antwerp	Ineos	Private company	Chemicals	2020 — Emerging precinct	Emerging	Incubator office near to national HQ	Join a fast-improving cluster around Europe's leading port, tap into new insights produced by SMEs and spin-outs, take part in sustainable innovation in return for major chemical project opportunity.	Proactive partner of cluster development agency to develop sustainable solutions. Adviser in main incubator.
Boston Seaport District	Vertex Pharmaceuticals	Private company	Life sciences	2014 — Emerging precinct	Globally significant	Global HQ	Appeal to talent in vibrant urban setting, clustering potential, tax breaks from government, access to large bespoke workspace needed for labs.	Accelerate specialisation, student internships & scholarships, community lab workspace, catalyst for infrastructure development, precinct vibrancy and footfall.
Brooklyn Navy Yard	Steiner Studios	Private company	Film & TV	2004 — Active precinct	Globally significant	Global HQ	Long-term potential to grow, space affordability in expensive city, potential to concentrate and co-locate all production facilities, reputation as 'alternative'.	Attracting many smaller media startups to precinct, mentorship for film students, incremental development as expanded across precinct.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
Capital City Innovation, Austin	Central Health	Public health provider	Healthcare	2004 — Pre-existing precinct	Active	Main HQ	Precinct redevelopment opportunity, diversification of revenue streams to fund local health services, and proximity to founding partners (Dell Seton Medical Centre and University of Texas).	Pioneer of mixed-use and quality lab space; partnership with research university and medical centre, provision of commercial and collaborative spaces, placemaking, effective liaison with community.
Cumulus Park, Amsterdam	ING	Private company	Finance	2019 — Planned precinct	Emerging	Global HQ	Create an innovation platform for fintech and more efficient banking.	Invested in key buildings and programs.
Discovery Park, Indianapolis* (*Information is based on desk research only)	Purdue University	Public university	High-end manufacturing	2001 — Planned precinct	Active	Whole university	Develop cadre of companies on owned land, university ranking improvement.	Invested in key research facilities and programs, innovation partnerships with other tenants.
DUMBO, New York City	Etsy	Private company	Creative industries	2016 — Globally significant	Globally significant	Global HQ	Access to talent, large floorplates, potential to demonstrate community and sustainability impact.	Provision of shared lab/sound facilities, standards on healthy work environment.
Grand Canal Innovation District, Dublin	Trinity College Dublin Google	Public university Private company	Multiple Digital	1827 — Pre-existing precinct 2012 — Pre-existing precinct	Emerging	Two hectares of new academic departments European HQ	Long-standing resident, optimise land assets; desire to grow more innovation businesses and improve talent retention. Tax efficiency and business climate; proximity to other national markets; signature location; access to young and ambitious workforce.	Convenor and connector between academia and tech businesses, co-funding key infrastructure, advocate of optimising policy. Mentorship of startups; access to co-working spaces; technology partnerships with local government.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
Helsinki Innovation Village	GE Healthcare	Private company	Healthcare	2016 — Planned precinct	Emerging	National division	Increase in-house innovation capabilities, potential to speed up healthcare digital innovation by drawing on SMEs' agility and greater appetite for risk.	Financial support, provision of co-working space for SMEs and shared facilities, access to customers and market knowledge.
Herzliya, Tel Aviv	Interdisciplinary Centre (Reichman University, IDC Herzliya Tel Aviv)	Research and training Institute	Software	1994 — Active precinct	Globally significant	Postgraduate university	Proximity to high-tech businesses, business-friendly local government. Quality of life and appeal to young talent.	Systematically connect high-tech talent with growth businesses. Comprehensive provider of events and networks, developing research capabilities.
Industry City, New York City	AbelCine	Private company	Film & media	2018 — Emerging precinct	Active	Global HQ	Bespoke space, potential to cluster with like-minded firms and be closer to supply chain, neighbourhood momentum, greater affordability, tax credits.	Keen partner and collaborator, provision of shared facilities, alignment with precinct brand, studio tours, hands-on education.
Jurong Innovation District, Singapore	Hyundai	Private company	Automotive	2020 — Planned precinct	Emerging	Large EV manufacturing HQ	Access local market, test bed location, quality of neighbours.	Brand visibility, investment in shared infrastructure (test bed), expansion of capabilities to whole value chain and new niches.
Kendall Square, Boston	Biogen	Private company	Life sciences	1982 — Emerging precinct	Globally significant	Global HQ	Consolidate staff in one building — productivity and cost advantages, draw on precinct's reputation for science and innovation.	Innovation breakthroughs and spillovers, attractor of business and investment, participant in precinct's soft governance, encourage more collaborative real estate development.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
Kings Cross Knowledge Quarter, London	Google	Private company	Tech	2014 — Emerging precinct	Globally significant	National HQ	Exceptional citywide and international connectivity, vibrancy and authenticity, potential for commercial expansion, very large floorplates.	Catalyst for international companies to co-locate, lease space to tenants, provision of multi-use public space.
Kista Science City, Stockholm	Ericsson	Private company	IT/mobile	1960s — Planned precinct	Globally significant	Global HQ	Strategic location between city and airport, IT cluster, access to talent.	Global reputation, set up incubators, public realm improvements, role in governance.
Liverpool Knowledge Quarter	Royal College of Physicians	Public institution	Life sciences	2021 — Emerging district	Active	Second national HQ	Reputational gain and stronger identity, building's sustainability and well-being credentials, multi-stakeholder collaboration, opportunity to contribute to local/regional public health research, potential for greater internal agility, income diversification, Liverpool as a destination venue, commitment to community inclusion.	Job creation, provider of high-quality training for health professionals, increase international and national visibility, high-tech conference facilities that will drive visitor numbers.
MaRS Discovery District, Toronto	University of Toronto	Public university	Life sciences and tech	1827 — Pre-existing precinct	Globally significant	New department/ building	Long-term commitment to precinct and city, desire to improve univ competitiveness, build bridges between academia and innovation.	Helped to found precinct and co-finance the key hub for commercialisation, increased confidence of investors and encouraged to govt to relocate key facilities to grow the cluster.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
MiND Milan	Human Technopole	Research institute	Life sciences	2018 — Planned precinct	Emerging	New institute	Large well-located space and growth potential, potential to concentrate main players in the life sciences ecosystem, capable public-private development partnership.	Provider of wide range of mid-and high-level career opportunities, shared facilities, outward-facing public green spaces.
Park Innovaare, Greater Zurich	Paul Scherrer Institute	Government- funded R&D facility	Energy	2015 — Planned precinct	Emerging	Whole institute	Secure space for advanced laboratories, significant higher level public investment support.	Open access to facilities, education and training, accelerator programmes, collaboration with other tenants.
Phoenix Bioscience Core	TGen	Private non-profit company	Life sciences	2005 — Planned precinct	Active	HQ	Access to talent from 3 universities, opportunity to lead local ecosystem, space affordability, improving CBD transport infrastructure.	Spin out companies, embody the precinct's biomedical brand, attract talent, project collaboration and knowledge sharing with local universities.
one-north, Singapore	A*STAR	Government- funded R&D facility	IT, media, engineering	2008 — Emerging precinct	Globally significant	R&D office	Quality of infrastructure, opportunities for cross-sector convergence, strong Singapore government support.	Grow international biomedical partnerships, facilitate tech transfer, foster open innovation culture among risk-averse organisations, growing precinct identity through events, competitions, advice.
Oxford Road Corridor, Manchester	University of Manchester	Public university	Life sciences, advanced materials	1873 — Pre-existing precinct	Active	Whole university (including Graphene Institute)	Commercialise knowledge, deliver social inclusiveness goals.	Contributed to vision as founding member, dedicated precinct leadership, brand visibility, master planning, promotion of mixed-use development.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
Paris-Saclay	University Paris-Saclay	Public university	Life sciences, aeronautics & defence, deep tech	2015 — Emerging precinct	Active	Merger of multiple universities	Build collective strength in global rankings, student attraction and retention, specialisation.	Global reputation, better coordination in and visibility of higher education offer, wide pool of talent and researchers, support programs for entrepreneurs, major driver of tech transfer.
Queen Elizabeth Olympic Park Innovation District, London	BT Sport	Private company	Digital media/ esports	2013 — Emerging precinct	Active	New division HQ	Bespoke workspace, broadcasting clustering potential, affordability of location, precinct's post-Olympic brand legacy.	Knowledge transfer and SME customer, partner with local schools and universities, run apprenticeships, mentoring and coaching talent.
Sheffield Advanced Manufacturing Park	Boeing	Private company	Aerospace	2001 — Emerging precinct	Active	Joint venture with research centre; later, main Europe region manufacturing facility.	University's strong research capabilities, access to talent and skilled workforce, novel R&D opportunities.	Growth and resilience of whole aerospace value chain, attraction of other major industrial companies, inward investment, provision of cuttingedge machine facilities, talent development through training, apprenticeships and mentoring.
Shonan Health Innovation Park* (*Information is based on desk research only)	Takeda	Private company	Life sciences	2011 — Emerging precinct	Active	National HQ	Opportunity for better collaboration with pharmaceutical institutions, more openness to international networking, develop more home-grown technology, speed up rate of drug discovery through partnerships.	Fostered a culture of open innovation, more fluid partnerships with inbound international companies, provision of consulting services and shared spaces for local firms, partnerships with global universities.

Innovation Precinct	Anchor name	Type of anchor	Sector	Year & stage when joined precinct	Current precinct stage	Scale of anchor presence	Motivations joining precinct	Key precinct contributions
South Lake Union, Seattle	Amazon	Private company	IT/software, biotechnology	2010 — Planned precinct	Globally significant	Global HQ	Urban character and growth potential, mixed-use environment, connectivity.	Large-scale job creation and cluster development, brand value, co-investment in public and active transport infrastructure, customer to SMEs.
Tsukuba Science City, Tokyo	University of Tsukuba	Public university	Aerospace, energy	1973 — Planned precinct	Active	Whole university	Intentionally connecting research and industry, become a testbed for a smart city, borrowing from the first mover brand and visibility of the precinct.	Shared services, databases, and leisure facilities; commitment to local citizen engagement; online platform to accelerate collaboration between universities and companies.
University City District, Philadelphia	University of Pennsylvania	Public university	Life sciences	1992 — Active precinct	Globally significant	New department/ building	Leadership appetite to develop and commercialise research capabilities, improve public- private partnerships, increase visibility and specialisation.	Strong upskilling for scientific roles, pioneering local job initiatives, major local procurement, responsive community engagement, technology transfer, leader in precinct governance.
Kitchener- Waterloo	Blackberry	Private company	Tech, manufacturing, health tech	1984 — Emerging precinct	Globally significant	Global HQ	Proximity to university and surrounding talent base in IT and manufacturing.	Global reputation, participated in joint innovation programs, legacy of specialised talent, successful spin-outs.
Wynyard Quarter, Auckland	1. IBM 2. Datacom	Private companies	Tech	1. 2012 — Planned precinct 2. 2017 — Emerging precinct	Active	National HQ Consolidated office	Proximity to leading edge of national ecosystem, improve connections with clients, access to city centre location, amenities and vibrancy.	Innovation customer raising demand for precinct amenities, digital solutions applied in precinct construction techniques and B2B collaboration.

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References

- Dimos, C., Fai, F. M., and Tomlinson, P. R. (2021). "The attractiveness of university and corporate anchor tenants in the conception of a new cluster". Regional Studies, 55(8), 1473–1486. The literature on anchor tenants has been influenced substantially by Agrawal, A., and Cockburn, I. (2003). "The anchor tenant hypothesis: exploring the role of large, local, R&D-intensive firms in regional innovation systems." International Journal of Industrial Organization, 21(9), 1227-1253.
- 2 Turner, S. (2021). "Dispersive Innovation". Connected Places Catapult. Accessed 8 April 2022. https://cp.catapult.org.uk/news/dispersive-innovation/
- 3 Pasulka, S. (2012). "A Glympse of the future in Seattle's South Lake Union". *GeekWire*. Accessed 8 April 2022. https://www.geekwire.com/2012/glympse-future-seattles-south-lake-union/
- 4 By some definitions anchors can also include infrastructures and amenities such as ports, airports, logistics hubs, stadia, convention centres, libraries and incubators. These can be important customers or enablers of innovation but are not typically catalytic agents in an innovation precinct, and so are not a major subject of this paper.
- 5 Niosi, J., and Zhegu, M. (2010). "Anchor tenants and regional innovation systems: the aircraft industry". *International Journal of Technology Management*, 50(3/4), 263. https://doi.org/10.1504/ ijtm.2010.032676
- 6 These latter ambitions are observed especially in U.S. contexts, see for example Harkavy, I et al. (2014). "Effective Governance of a University as an Anchor Institution". Leadership and Governance in Higher Education, 2. https://www.nettercenter.upenn.edu/sites/default/files/Effective_Governance_of_a_University_as_an_Anchor_Institution-Raabe_Publishers.pdf
- 7 NSW Innovation and Productivity Council. (2018). "NSW Innovation Precincts: Lessons from international experience". NSW Government. https://www.investment.nsw.gov.au/assets/Uploads/files/IPC/Full-Report-IPC-NSW-Innovation-Precincts-2018.pdf
- 8 Anchors are a major source of stable employment in their city. A study of anchor institutions in the U.S. found that they are the largest employers in around 66% of US cities; Florida, R. (2015). "The New Grand Bargain Between Cities and Anchor Institutions". Bloomberg. Accessed 8 April 2022. https://www.bloomberg.com/news/articles/2015-10-05/why-cities-and-anchor-institutions-need-to-work-together
- 9 Dimos, C., Tomlinson, P., and Fai, F. (2018). "An Examination of University and Corporate Attractiveness as Anchor Tenants in the Conception (Pre-Birth) of a New Cluster". European Week of Regions and Cities University 6th Master Class on EU Cohesion Policy; Dimos, C., Fai, F. M., & Tomlinson, P. R. (2021). "The attractiveness of university and corporate anchor tenants in the conception of a new cluster". Regional Studies, 55(8), 1473–1486. https://doi.org/10.1080/0034340 4.2021.1889490; Athey, G., Glossop, C., Harrison, B., Nathan, M., & Webber, C. (2007). "Innovation and the city: How innovation has developed in five city-regions". https://media.nesta.org.uk/documents/innovation_and_the_city.pdf

- 10 Burnett, K. (2017, September 12). "Comment: Why Boeing chose Sheffield". University of Sheffield. Accessed 8 April 2022. https://www.sheffield.ac.uk/news/nr/why-boeing-chose-sheffield-amrc-sheffield-city-region-keith-burnett-1.684283
- 11 Messier-Bugatti-Dowty
- 12 Hyundai Motor Company. (2020, August 10). "Hyundai Motor Announces IONIQ Brand Dedicated to EVs, Opening New Chapter for Customer-Centric EV Experiences". Accessed 8 April 2022. https://www.hyundai.com/worldwide/en/company/newsroom/-0000016505
- 13 Nanyang Technological University. (2021, September 2). "NTU Singapore and Hyundai Motor Group to develop advanced solutions for electric vehicle manufacturing". Accessed 8 April 2022. https://www.ntu.edu.sg/docs/default-source/corporate-ntu/hub-news/ntu-singaporeand-hyundai-motor-group-to-develop-advanced-solutions-for-electric-vehicle-manufacturing-5c74b2b0-2646-4d19-ab78-0784f77ab0d5.pdf?sfvrsn=ad77f359_3
- 14 Dimos, C., Fai, F. M., and Tomlinson, P. R. (2021). "The attractiveness of university and corporate anchor tenants in the conception of a new cluster". *Regional Studies*, 55(8), 1473–1486. https://doi. org/10.1080/00343404.2021.1889490
- 15 Tripp Umbach (2014). "The Economic and Social Contributions: University of Arizona Phoenix and the Phoenix Biomedical Campus". Accessed 8 April 2022. https://qa.dtphx.org/downloads/economic-impact-study-of-the-phoenix-biomedical-campus.pdf
- 16 City of Phoenix. (n.d.). "Major Reinvestment Focus Areas". Accessed 7 April 2022, https://www.phoenix.gov/econdev/major-reinvestment-focus-areas
- 17 Cruz, J. (2007). "Grand Opening of Arizona Biomedical Collaborative Building". University of Arizona News. Accessed 8 April 2022. https://news.arizona.edu/story/grand-opening-of-arizonabiomedical-collaborative-building
- 18 Gallego, K. (2021, April 20). "Phoenix Innovators are Driving Translational Discovery". BIO. Accessed 8 April 2022. https://www.bio.org/blogs/phoenix-innovators-are-driving-translational-discovery
- 19 Tripp Umbach (2014). "The Economic and Social Contributions: University of Arizona Phoenix and the Phoenix Biomedical Campus". Accessed 8 April 2022. https://qa.dtphx.org/downloads/economic-impact-study-of-the-phoenix-biomedical-campus.pdf
- 20 InnovationAus. (2021, September 30). "Lucas Heights gets \$30m nuclear medicine factory". Accessed 8 April 2022. https://www.innovationaus.com/lucas-heights-gets-30m-nuclear-medicine-factory/
- 21 OncoBeta. (2021, July 13). "Australian Nuclear Science and Technology Organization (ANSTO), the new production partner of OncoBeta® GmbH in Australia". Accessed 8 April 2022. https://www.oncobeta.com/company/details/australian-nuclear-science-and-technology-organization-ansto-the-new-production-partner-of-oncobetar-gmbh-in-australia
- 22 ANSTO Staff. (2018, August 7). "Sharing Sydney's experience with South Australia". ANSTO. Accessed 8 April 2022. https://www.ansto.gov.au/news/sharing-sydneys-experience-south-australia

- 23 ANSTO Staff. (2021, March 10). "Nandin Deep Tech Hothouse Sees Businesses Bloom". ANSTO. Accessed 8 April 2022. https://www.ansto.gov.au/news/nandin-deep-tech-hothouse-sees-businesses-bloom
- 24 Clark, G., and Moonen, T. (2015a). "Technology, Real Estate, and the Innovation Economy". Urban Land Institute. https://europe.uli.org/wp-content/uploads/2015/09/FINAL-Innovation-Report1.pdf
- 25 Miettinen, T. (2016). "A Business Incubator, Accelerator, or Coworking Space? Case Health Innovation Village at GE". Lappearranta University of Technology, School of Business and Management. https://lutpub.lut.fi/handle/10024/123437
- 26 Kellner, T. (2018, December 20). "Some Like It Cold: How Europe's Hottest Startup Scene Hatched In Wintry Finland". General Electric. Accessed 8 April 2022. https://www.ge.com/news/reports/like-cold-europes-hottest-startup-scene-hatched-wintry-finland
- 27 Urbis. (2019). "Atlassian: TechCentral Stage 1: Catalysing The TechCentral Innovation Ecosystem". Avenor.
- 28 Batinfo (2019, February 4). "Work begins on the new AgroParisTech-Inra Campus in Paris-Saclay". Batinfo. Accessed 8 April 2022. https://batinfo.com/en/actuality/start-of-work-on-the-new-dagroparistech-inra-campus-in-paris-saclay_12052
- 29 The Economist (2020, August 29). "How France created a university to rival MIT". The Economist. Accessed 8 April 2022. https://www.economist.com/europe/2020/08/29/how-france-created-a-university-to-rival-mit; Casassus, B. (2020, October 27). "How France overcame the odds to build a research mega-campus". Nature. Accessed 8 April 2022. https://www.nature.com/articles/d41586-020-03004-x
- 30 Institut Polytechnique de Paris. (n.d.). "Innovation Park". Accessed 8 April 2022. https://www.ip-paris.fr/en/innovation/innovation-park; École Polytechnique. (2020, June 26). "Total to be the first R&I center implemented in innovation park". Institut Polytechnique de Paris. Accessed 8 April 2022. https://www.polytechnique.edu/en/content/total-be-first-ri-center-implemented-innovation-park
- 31 SATT Paris-Saclay (2019). "L'essentiel 2019". Accessed 8 April 2022. https://webcache. googleusercontent.com/search?q=cache:0NsiGxSsrsMJ:https://satt-paris-saclay.fr/wp-content/uploads/2020/06/SATT_Paris-Saclay-RA-2019-VF.pdf+&cd=1&hl=en&ct=clnk&gl=uk; SATT Paris-Saclay. (n.d.). In short. Accessed 8 April 2022. https://satt-paris-saclay.fr/en/in-short/
- 32 Gupta, R. (2020, March). "Does Goliath Help David? Anchor Firms and Startup Clusters". Duke University, Center for Economic Studies. https://www2.census.gov/ces/wp/2020/CES-WP-20-17.pdf
- 33 Walsh, P. (2020). "Stockholm: Future Success". Invest Stockholm. https://www.investstockholm.com/globalassets/invest/reports/stockholm_talent_report_2020.pdf
- 34 The University of Newcastle Australia. (2019, February 27). "Altitude Accord partnership to grow future defence workforce". Accessed 8 April 2022. https://www.newcastle.edu.au/newsroom/featured/altitude-accord-partnership-to-grow-future-defence-workforce
- 35 San Diego Regional EDC. (n.d.). "Building San Diego's Talent Pipeline". Accessed 8 April 2022. https://sd-regional-edc.maps.arcgis.com/apps/Cascade/index.html?appid=97fc15fd9df04152 aa41d009a87ed8eb

- 36 Here East. (2021). "Here East Launches Impact Report 2021". https://hereeast.com/news/here-east-launches-impact-report-2021/
- 37 Davis, H. (2016, May 12). "Penn remains focused on local, diversity purchasing". Penn Today. Accessed 8 April 2022. https://penntoday.upenn.edu/news/penn-remains-focused-on-local-diversity-purchasing
- 38 Accelerator for America. (2019, December 10). "Release: West Philadelphia Skills Initiative Generates \$37 Million in Wages From Previously Excluded Workers". Accessed 8 April 2022. https://www.acceleratorforamerica.org/news/release-west-philadelphia-skills-initiative-generates-37-million-in-wages-from-previously-excluded-workers
- 39 Katz, B., and Humes, M. (2019). "West Philadelphia Skills Initiative: A Model for Urban Workforce Development". Nowak Metro Finance Lab. https://drexel.edu/~/media/Files/nowak-lab/Drexel_NMFL_CPI_WPSICityCase_web.ashx?la=en
- 40 Rodríguez, J.C. and Gómez, M. (2012). "Anchor tenants, technology transfer and regional innovation systems in emerging economies: a system dynamics approach". International Journal of Transitions and Innovation Systems, 2(1). https://ideas.repec.org/a/ids/ijtisy/v2y2012i1p14-37.html; Birch, E. (2010), "Anchor institutions and their role in metropolitan change: White paper on Penn IUR initiatives on anchor institutions". Penn Institute for Urban Research.; Jackson, M. & McInroy, N (2015). "Creating A Good Local Economy: The Role Of Anchor Institutions". CLES. https://cles. org.uk/wp-content/uploads/2016/10/Anchor-institutions.pdf p.7; Smallbone, D., Kitching, J., and Blackburn, R. (2015). "Anchor institutions and small firms in the UK: a review of the literature on anchor institutions and their role in developing management and leadership skills in small firms". UK Commission for Employment and Skills. https://assets.publishing.service.gov.uk/government/ uploads/system/uploads/attachment data/file/414390/Anchor institutions and small firms. pdf; Steady State Manchester (2017, May 5). "Anchor institutions". Accessed 8 April 2022. https:// steadystatemanchester.net/2017/05/15/policies-for-the-city-region-serialised-part-5-anchorinstitutions/#sdfootnote2sym; Goddard, J., Coombes, M., Kempton, L., and Vallance, P. (2014). "Universities as anchor institutions in cities in a turbulent funding environment: vulnerable institutions and vulnerable places in England". Cambridge Journal of Regions, Economy and Society, 7(2), 307-325. https://doi.org/10.1093/cjres/rsu004; Florida, R. (2015, October 5). "The New Grand Bargain Between Cities and Anchor Institutions". Bloomberg. Accessed 8 April 2022. https://www.bloomberg.com/news/articles/2015-10-05/why-cities-and-anchorinstitutions-need-to-work-together; The Work Foundation. (2010). "Anchoring growth: The role of 'anchor institutions' in the regeneration of UK cities."; Katz, B., & Wagner, J. (2014). "The Rise of Innovation Districts: A New Geography of Innovation in America". Metropolitan Policy Program. Brookings. Accessed 8 April 2022. https://www.brookings.edu/wp-content/uploads/2016/07/ InnovationDistricts1.pdf; Parrillo, A. J., & de Socio, M. (2014). Universities and hospitals as agents of economic stability and growth in small cities: A comparative analysis. The Industrial Geographer, 11(1-28). http://hdl.handle.net/11603/1612
- 41 Spigel, B., and Vinodrai, T. (2021). "Meeting its Waterloo? Recycling in entrepreneurial ecosystems after anchor firm collapse". Entrepreneurship & Regional Development, 33(7–8), 599–620. https://doi.org/10.1080/08985626.2020.1734262

- 42 IOL. (2014, April 24). "BlackBerry's fall sparks a boom in start-ups in Canada's Silicon Valley". Accessed 8 April 2022. https://www.iol.co.za/business-report/features/blackberrys-fall-sparks-a-boom-in-start-ups-in-canadas-silicon-valley-1679517
- 43 Ornston, D., and Camargo, L. (2021). "The Benefits of an Apathetic Anchor: Why Waterloo Adjusted Faster Than Ottawa". Munk School of Global Affairs and Public Policy. Innovation Policy Lab Working Paper Series 2021-01. https://munkschool.utoronto.ca/ipl/files/2021/03/IPL-Working-Paper-2021-01.pdf
- 44 A*STAR Research. (2013, November 19). "Biopolis: Ten years on". Accessed 8 April 2022. https://research.a-star.edu.sg/articles/features/biopolis-ten-years-on/
- 45 Cheok, J. (2016, September 13). "A*Star to launch Singapore's first open innovation lab". The Business Times. Accessed 8 April 2022. https://www.businesstimes.com.sg/technology/astar-to-launch-singapores-first-open-innovation-lab
- 46 BioSpectrum Asia Edition. (2019, September 15). "A*STAR, JTC and Science Centre Singapore organise one-north Festival 2019". Accessed 8 April 2022. https://www.biospectrumasia.com/news/30/14473/astar-jtc-and-science-centre-singapore-organise-one-north-festival-2019-.html
- 47 JTC. (2021). "One-north". Accessed 8 April 2022. https://www.jtc.gov.sg/find-land/land-for-long-term-development/one-north
- 48 Weisman, R. (2014, February 4). "Vertex opens new South Boston waterfront headquarters". The Boston Globe. Accessed 8 April 2022. https://www.boston.com/news/innovation/2014/02/04/vertex-opens-new-south-boston-waterfront-headquarters/
- 49 Ross, C. (2011, January 25). "City draws Cambridge drug firm to Fan Pier". *The Boston Globe*. Accessed 8 April 2022. http://archive.boston.com/business/healthcare/articles/2011/01/25/city_draws_cambridge_drug_firm_to_fan_pier/
- 50 Chesto, J. (2017). "Vertex pledges \$500 million for charitable efforts over 10 years". The Boston Globe. Accessed 8 April 2022. https://www.bostonglobe.com/business/2017/10/16/vertex-pledges-for-charitable-efforts-over-next-years/farofoHx1RzLHtqbbk9jUP/story.html
- 51 ThinkBusiness. (n.d.). "Google opens an entrepreneur's hub in Dublin". Bank of Ireland. Accessed 8 April 2022. https://www.thinkbusiness.ie/articles/google-and-dogpatch-labs/
- 52 Dogpatch Labs. (2021). "Our Story". Accessed 8 April 2022. https://dogpatchlabs.com/about/
- 53 Leonard, R. (2019, April 8). "Google Seeks Ambitious Startups to Join its Adopt a Startup Programme". Irish Tech News. Accessed 8 April 2022. https://irishtechnews.ie/google-seeks-ambitious-startups-to-join-its-adopt-a-startup-programme/
- 54 O'Brien, C. (2021, May 10). "Google teams up with Dublin City Council on air pollution project". The Irish Times. Accessed 8 April 2022. https://www.irishtimes.com/business/technology/google-teams-up-with-dublin-city-council-on-air-pollution-project-1.4560348
- 55 Macquarie University (2021, April 27). "Research Excellence Awards-introducing new RIPE award for 2021". Accessed 8 April 2022. https://www.mq.edu.au/thisweek/2021/04/27/research-excellence-awards-introducing-new-ripe-award-for-2021/#.YIAtTlbMLzd
- 56 Purdue Research Foundation. (2020). "2020 Annual Report". Purdue University. Accessed 8 April 2022. https://prf.org/about/2020AnnualReport.pdf

- 57 Wolfe, D. (2009). "The ICT Cluster of Waterloo, Canada". In OECD, Clusters, Innovation and Entrepreneurship. OECD Publishing. https://doi.org/10.1787/9789264044326-10-en.; Inwood, S. (2018, October 2). "University of Waterloo Drives Innovation in Waterloo Region". University Industry Innovation Network. Accessed April 7, 2022. Accessed 8 April 2022. https://www.uiin.org/2018/10/02/university-waterloo-drives-innovation-waterloo-region/
- 58 Ibid.
- 59 Royal College of Physicians. (2019, October 8). "Healthy building brings wider benefits for Liverpool". Accessed 8 April 2022. https://www.rcplondon.ac.uk/news/healthy-building-brings-wider-benefits-liverpool
- 60 Liverpool City Region Combined Authority. (2020). "Strategic Investment Fund". Accessed 8 April 2022. https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA-SIF-Investment-Strategy.pdf
- 61 Royal College of Physicians. (n.d.). "The Spine Building". Accessed 8 April 2022. https://www.rcplondon.ac.uk/about-us/what-we-do/rcp-spine; Liverpool Business News. (2020, June 22). "Fit-out begins at £35m Royal College of Physicians HQ". Accessed 8 April 2022. https://lbndaily.co.uk/fit-begins-35m-royal-college-physicians-hq; Casey, D. (2016, July 29). "Anchor Deal Agreed for £1bn Medical Hub". *Insider Media Limited*. Accessed 8 April 2022. https://www.insidermedia.com/news/north-west/anchor-deal-agreed-for-1bn-medical-hub
- 62 Royal College of Physicians. (2019, October 8). "Healthy building brings wider benefits for Liverpool". Accessed 8 April 2022. https://www.rcplondon.ac.uk/news/healthy-building-brings-wider-benefits-liverpool
- 63 Catalisti (n.d.). "Catalisti coordinates Moonshot initiative, building on Flanders' leadership in breakthrough research and innovation for a carbon-smart industry". Accessed 8 April 2022. https://catalisti.be/catalisti-coordinates-moonshot-initiative-building-on-flanders-leadership-in-breakthrough-research-and-innovation-for-a-carbon-smart-industry/
- 64 BlueChem. (n.d.). "Partners". Accessed April 7, 2022. Accessed 8 April 2022. https://www.bluechem.be/en/tag/partners/
- 65 Lab Central. (2020). "Impact 2020". Accessed 8 April 2022. https://labcentral.org/uploads/assets/ LABCENTRAL_2020IMPACT.pdf
- 66 Vrije Universiteit Amsterdam. (n.d.). "0|2 Lab Building". Accessed 8 April 2022. https://vu.nl/en/about-vu/more-about/o2-lab-building
- 67 Clark, G., and Moonen, T. (2015b). "Technology, Real Estate and the Innovation Economy: Case Studies". https://lbl5hbukq5a2dpgyuo8uvz44-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/FINAL-Appendix-Case-Study1.pdf
- 68 Karlen, L. (2018). "Samsung: how to break into a notoriously secretive tech giant". Intralink. Accessed 8 April 2022. https://www.intralinkgroup.com/en-GB/Media/Blog/March-2018/Samsung-the-tech-company-you-need-to-get-close-t
- 69 Kista Science City. (n.d.). "Welcome to Kista Science City". Accessed 8 April 2022. https://kista.com/english/

- 70 Caulier, S. (2018). Kista: le principal cluster high-tech d'Europe est en Suède. Accessed 8 April 2022. https://thegoodlife.thegoodhub.com/2018/01/18/kista-le-principal-cluster-high-tech-deurope-est-en-suede/
- 71 Telefonaktiebolaget LM Ericsson. (2015, May 13). "Ericsson Garage: technology incubator". Accessed 8 April 2022. http://web.archive.org/web/20200926091321/https://www.ericsson.com/en/blog/2015/5/ericsson-garage-technology-incubator
- 72 Jacobson, A., and Ramslöv, P. (2017). "Corporate Innovation Powered By Startups". Teyi Services AB. https://www.automationregion.com/filer/docs/event2017/Getting_Started_with_Startups.pdf
- 73 Telefonaktiebolaget LM Ericsson. (2015, May 13). "Ericsson Garage: technology incubator". Accessed 8 April 2022. http://web.archive.org/web/20200926091321/https://www.ericsson.com/en/blog/2015/5/ericsson-garage-technology-incubator
- 74 Alpman, M. (2015, May 7). "Ericsson öppnar garage för radikala idéer". Ny Teknik. Accessed 8 April 2022. https://www.nyteknik.se/digitalisering/ericsson-oppnar-garage-for-radikalaideer-6393706
- 75 Mynewsdesk. (2016, February 18). "Klart med digital testbädd i Kista". Accessed 8 April 2022. https://www.mynewsdesk.com/se/kistasciencecity/pressreleases/klart-med-digital-testbaedd-i-kista-1320827
- 76 O'Brien, C. (2020, January 3). "Government backs new €1bn Silicon Docks campus for Trinity College". The Irish Times. https://www.irishtimes.com/news/education/government-backs-new-1bn-silicon-docks-campus-for-trinity-college-1.4129082
- 77 Quinlan, R. (2020, November 19). "Trinity College appoints Savills to advise on €1bn Silicon Docks campus". The Irish Times. https://www.irishtimes.com/business/commercial-property/trinity-college-appoints-savills-to-advise-on-1bn-silicon-docks-campus-1.4413051
- 78 Trinity College Dublin. (2021, March 26). "The Innovation Hub at Trinity East has everything. Except a name.". Accessed 8 April 2022. https://www.tcd.ie/innovation-district/news/2021/03/NameInnovationHub/index.php
- 79 Trinity College Dublin. (2020a). "E3 Insitute and Grand Canal Innovation District". Accessed 8
 April 2022. https://www.tcd.ie/alumni/inspiring-generations/e3-grand-canal-innovation-district/;
 Trinity College Dublin. (2020b). "E3, Engineering, Environment & Emerging Technologies".
 https://viewer.ipaper.io/trinity-development-and-alumni/case-for-support1/e32/e3/?page=1
- 80 Quinlan, R. (2020, November 19). "Trinity College appoints Savills to advise on €1bn Silicon Docks campus". *The Irish Times*. https://www.irishtimes.com/business/commercial-property/trinity-college-appoints-savills-to-advise-on-1bn-silicon-docks-campus-1.4413051
- 81 Niosi, J.E. and Zhegu, M. (2008). "The anchor tenant and the Regional Innovation Systems". *Georgia Institute of Technology*. https://smartech.gatech.edu/handle/1853/36848
- 82 Factory Berlin. (2020). "Factory 2020 Review Numbers". https://factoryberlin.com/app/uploads/2020/12/factoryberlin_2020_review_numbers.pdf
- 83 Amazon. (2019, November 8). "South Lake Union: How business investment builds a community". The Seattle Times. https://www.seattletimes.com/sponsored/south-lake-union-how-business-investment-builds-a-community/

- 84 The University of Manchester. (2020). "ID Manchester partner selection process scheduled to resume". Accessed 8 April 2022. https://www.manchester.ac.uk/discover/news/id-manchester-partner-selection-process-scheduled-to-resume/
- 85 Joseph Rowntree Foundation. (2017). "Maximising the Local Impact of Anchor Institutions: A Case Study of Leeds City Region". Accessed 8 April 2022. https://www.jrf.org.uk/report/maximising-local-impact-anchor-institutions-case-study-leeds-city-region
- 86 Katz, B., and Wagner, J. (2014). "The Rise of Innovation Districts: A New Geography of Innovation in America". Brookings. https://www.brookings.edu/wp-content/uploads/2016/07/ InnovationDistricts1.pdf
- 87 Saksa, J. (2018, July 13). "As Drexel transforms University City, communities nearby prepare for gentrification". WHYY. Accessed 8 April 2022. https://whyy.org/segments/as-drexel-transforms-university-city-communities-nearby-prepare-for-gentrification/
- 88 EDC Research Bureau. (2021, January 28). "Study release: One percent shift in procurement could mean thousands of jobs for San Diegans". San Diego Regional Economic Development Corporation. Accessed 8 April 2022. https://www.sandiegobusiness.org/blog/study-release-one-percent-shift-in-procurement-could-mean-thousands-of-jobs-for-san-diegans/; San Diego Regional Economic Development Corporation. (2021). "Anchor Institutions". Accessed 8 April 2022. https://www.sandiegobusiness.org/about-edc/our-initiatives/anchorcollaborative/
- 89 Abunimeh, M. (2021). "Penn ranked among best large employers in the country by Forbes". The Daily Pennsylvanian. Accessed 8 April 2022. https://www.thedp.com/article/2021/03/forbesranks-penn-among-best-large-employers
- 90 Kromer, J., and Kerman, L. (2004). "West Philadelphia Initiatives: A Case Study in Urban Redevelopment". University of Pennsylvania, Fels Institute of Government. Accessed 8 April 2022. https://community-wealth.org/content/west-philadelphia-initiatives-case-study-urban-redevelopment
- 91 Penn Business Services. (2019). "Procurement Services". University of Pennsylvania. Accessed 8 April 2022. https://www.business-services.upenn.edu/services/procurement-services
- 92 Davis, H. (2016, May 12). "Penn remains focused on local, diversity purchasing". Penn Today. Accessed 8 April 2022. https://penntoday.upenn.edu/news/penn-remains-focused-on-local-diversity-purchasing
- 93 NYCEDC (2020, August 13). "NYCEDC Announces Selection of Steiner Studios to Develop and Operate Made in New York Film and TV Soundstage Facility in Sunset Park, Brooklyn". Accessed 8 April 2022. https://edc.nyc/press-release/nycedc-announces-selection-steiner-studios-develop-and-operate-made-new-york-film-and-tv-soundstage-in-brooklyn
- 94 Raiji, A. (n.d.). "London's first new concert hall for 25 years, and award-winning offices". *ARUP*. Accessed 8 April 2022. https://www.arup.com/projects/kings-place-london
- 95 Central Health. (n.d.). "Community Engagement". Accessed 8 April 2022. https://webcache. googleusercontent.com/search?q=cache:30heznA04M8J:https://www.centralhealth.net/ourwork/sehwc/community-engagement/+&cd=1&hl=en&ct=clnk&gl=gg

- 96 Ornston, D., & Camargo, L. (2021). "The Benefits of an Apathetic Anchor: Why Waterloo Adjusted Faster Than Ottawa" (Innovation Policy Lab Working Paper Series 2021-01). https://munkschool.utoronto.ca/ipl/files/2021/03/IPL-Working-Paper-2021-01.pdf
- 97 MaRS Discovery District notes, "A more recent trend, however, sees the rise of the innovation hub as anchor."
- 98 NSW Innovation and Productivity Council. (2022). "Global talent wars: learning from locations that attract the best Council Research Paper, Sydney". NSW Government. https://www.investment.nsw.gov.au/assets/Uploads/files/IPC/Full-Report-IPC-NSW-Innovation-Precincts-2018.pdf
- 99 Ibid.
- 100 Vaughn, A. (2020, March 3). "Is Boston's Innovation Economy Doomed?". City Life. Accessed 8 April 2022. https://www.bostonmagazine.com/news/2020/03/03/innovation-economy/
- 101 Amazon Staff. (2020, January 13). "Catalyst for growth". Amazon. Accessed 8 April 2022. https://www.aboutamazon.com/news/job-creation-and-investment/catalyst-for-growth
- 102 Ford, C., Hallam, S., and Convery, I. (2019, November). "Regional Innovation Ecosystems: Understanding their nature, identifying their value". *Lancaster University and University of Cumbria*. https://www.research.lancs.ac.uk/portal/files/309949135/REGION_1.PDF
- 103 CBJ. (2016). "Technoparc Montréal". https://www.cbj.ca/brochures/2016/Nov/Technoparc/files/assets/common/downloads/Technoparc.pdf
- 104 Padgett, J., and Powell, W. (2012). "The Emergence of Organizations and Markets". *Princeton University Press.* https://www.reed.edu/sociology/faculty/whittington/docs/Powell_ Packalen_Whittington_2012.pdf
- 105 Dimos, C., Fai, F. M., and Tomlinson, P. R. (2021). "The attractiveness of university and corporate anchor tenants in the conception of a new cluster". Regional Studies, 55(8), 1473–1486. https://doi.org/10.1080/00343404.2021.1889490
- 106 Bruntwood SciTech. (2020). "Metro Dynamics". Accessed 8 April 2022. https://assets.ctfassets.net/5wq17jjenal9/3soyiyUb77XUJSPosUFf6y/9d3aa1a86d9b9914b16591793a5727ac/place-matters-report.pdf
- 107 Glasner, J. (2020, December 24). "Moderna's Vaccine Is A Startup Triumph, Too". Crunchbase News. Accessed 8 April 2022. https://news.crunchbase.com/news/moderna-covid-vaccine-noubar-afeyan/
- 108 Robinson, J. (2018, September 25). "U of T 'plants flag' on Toronto's new waterfront innovation corridor". *University of Toronto*. Accessed 8 April 2022. https://www.utoronto.ca/news/u-t-plants-flag-toronto-s-new-waterfront-innovation-corridor
- 109 MaRS. (2015, September 8). "Ontario Government, University of Toronto and MaRS secure Johnson & Johnson Innovation, JLABS for Toronto-first JLABS Incubator outside of United States". Accessed 8 April 2022. https://www.marsdd.com/media-centre/ontario-government-university-of-toronto-and-mars-secure-johnson-johnson-innovation-jlabs-for-toronto-first-jlabs-incubator-outside-of-united-states/
- 110 Mirage.News. (2020, December 11). "Cincy Inno: Public company looks to grow at 1819 Innovation Hub". Accessed 8 April 2022. https://www.miragenews.com/cincy-inno-public-company-looks-to-grow-at-1819-innovation-hub/

- 111 Takeda Pharmaceutical Company Limited. (2020, April 1). "Takeda Announces Advancement of the Operation for the Shonan Health Innovation Park (Shonan iPark)". Accessed 8 April 2022. https://www.takeda.com/newsroom/newsreleases/2020/takeda-announces-advancement-of-the-operation--for-the-shonan-health-innovation-park-shonan-ipark/; Shonan Health Innovation Park. (2021, April 15). "New Pathway Launched for Pioneering Life Science Companies Seeking Japanese Market Entry". PR Newswire Europe Limited. Accessed 8 April 2022. https://www.prnewswire.co.uk/news-releases/new-pathway-launched-for-pioneering-life-science-companies-seeking-japanese-market-entry-844039201.html
- 112 Takeda Pharmaceutical Company Limited. (2020, April 1). "Takeda Announces Advancement of the Operation for the Shonan Health Innovation Park (Shonan iPark)". Accessed 8 April 2022. https://www.takeda.com/newsroom/newsreleases/2020/takeda-announces-advancement-of-the-operation--for-the-shonan-health-innovation-park-shonan-ipark/; Shonan Health Innovation Park. (2021, April 15). "New Pathway Launched for Pioneering Life Science Companies Seeking Japanese Market Entry". PR Newswire Europe Limited. Accessed 8 April 2022. https://www.prnewswire.co.uk/news-releases/new-pathway-launched-for-pioneering-life-science-companies-seeking-japanese-market-entry-844039201.html; Akama, K. (2021, May 9). "Takeda bets on Japan R&D hub for next blockbuster drug". Nikkei Asia. Accessed 8 April 2022. https://asia.nikkei.com/Business/Pharmaceuticals/Takeda-bets-on-Japan-R-D-hub-for-next-blockbuster-drug
- 113 Minshall, T., and Mortara, L. (2016). "Evolving physical infrastructure to support open innovation in the digital age: case studies from the UK". 2016 World Open Innovation Conference. https://www.repository.cam.ac.uk/handle/1810/261824
- 114 Matheson, R. (2017). "MIT signs agreement to redevelop Volpe Center". Massachusetts Institute of Technology. Accessed 8 April 2022. https://news.mit.edu/2017/agreement-redevelop-volpe-center-kendall-square-0118
- 115 Telecom Paper (2018, October 4). "Wayra to help Spain's Renfe launch rail-focused accelerator". Accessed 8 April 2022. https://www.telecompaper.com/news/wayra-to-help-spains-renfe-launch-rail-focused-accelerator 1263514
- 116 Magyar, V. (2018, October 15). "Inside Alpha, Barcelona's Moonshot Factory". Barcelona Startup News. Accessed 8 April 2022. https://barcelonastartupnews.com/stories/inside-alpha-barcelonas-moonshot-factory/
- 117 Pete Abel, President/CEO, AbelCine (Industry City, New York)
- 118 Massachusetts Institute of Technology (2010). "MIT continues outreach regarding Kendall Square redevelopment". Accessed 8 April 2022. https://news.mit.edu/2010/kendall-update; Kendall Square Association. (n.d.). "Board of Directors". Accessed 8 April 2022. https://kendallsquare.org/board-of-directors
- 119 Massachusetts Institute of Technology. (2015, May 7). "Kendall Square Initiative ready to take next steps". Accessed 8 April 2022. https://news.mit.edu/2015/kendall-square-initiative-nextsteps-0507

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