





# Ullandhaug Innovation District

### Executive summary

- The Ullandhaug innovation district is in the initial stages of development, seeking recommendations to transform the area surrounding the existing university, innovation park and future hospital into a vibrant urban innovation space.
- Three areas are identified for the early stages of development of the Ullandhaug Innovation District: 1- Human Capital attraction; 2- The partners involved; 3- Its identity and its communication.
- It is important to retain the talents trained in the University of Stavanger, as they are more likely to pursue their professional careers in the city and in related activities to the ones present in the region.
- It is also important to establish networks not only with other Science and Technology Parks but also with other clusters in the country and potential clusters (or industries/business associations) in the region.
- Leverage from the human capital generated through the spinoffs of the University's Lab and incubators. These organisms are key actors generating not only ideas but also talent.

#### Policy recommendations to foster innovation and strengthen economic activities in the region:

- 1. Focus on expanding and connecting the existing strengths of Ullandhaug and the surrounding area such as the energy sector and green tech startups, to foster collaboration and cross-pollination of ideas.
- 2. Provide incentives and tools for entrepreneurs and spinouts from the university and existing firms. Offer specialized support in target sectors such as energy and green tech.
- 3. Foster a culture of innovation through inclusive urban design, hosting events and workshops, and providing mentorship and networking opportunities to startups.
- 4. Develop a comprehensive transportation plan to ensure that the park is both accessible to employees and visitors and takes advantage of existing surrounding urban areas.
- 5. Provide affordable housing options and mixed use urban space close to the park to attract and retain top talent.
- 6. Foster collaborations with other science and technology parks in the region to increase visibility and attract investment.
- 7. Provide training and upskilling opportunities for residents to ensure that the local workforce is equipped to meet the needs of the companies in the park.
- 8. Develop a unique identity around the park and the university as a hub for innovation and research, highlighting their unique strengths and assets.





# Scope of problem

The Ullandhaug Innovation District is a part of the City Council of Stavanger's plan to develop the city into a 'knowledge city'. Already, the area is comprised of key innovation actors, and has been a region of business development for some 50 years. The University of Stavanger, Innovation Park Stavanger, the upcoming university hospital, and the Norwegian petroleum directorate government facilities are anchored in the suburban area in the South-West of Stavanger, with a common goal to strengthen business, research and innovation in the region. Now in its planning phase, the Ullandhaug Innovation District steering group is seeking advice on the strategic direction of the project.

In this policy brief we provide initial advice to the steering group as the innovation district enters the first stage of creating a vision and establishing a governance structure. We focus on three core areas: (1) human capital attraction, (2) commitment from partners and stakeholders, and (3) identity and communication.

# Introduction

Innovation districts have emerged in multiple cities around the world as a strategic means to create new knowledge, products and technologies. Both deliberate and serendipitous interactions between key actors from government, education, and industry are made possible through physical and social planning, encouraging innovation and leading to advanced competitive advantage in the region.

Researchers from the Brookings Insitute have identified three general models of innovation districts (Katz, B. & Wagner, J., 2014).

Anchor +	Re-imagined urban areas	Urbanized science park	
Downtowns and mid-towns of	Obsolete industrial or	Suburban and	
central cities	warehouse districts	exurban areas	
Large scale mixed-use	Transformation powered by	Traditionally isolated, sprawling	
development is centered around	transit access, a historic building	areas of innovation are	
major anchor institutions and a	stock, and their proximity to	urbanizing through increased	
rich base of related firms,	downtowns, supplemented with	density and an infusion of new	
entrepreneurs and spin-offs.	research institutions and anchor	mixed activities (including retail	
	companies.	and restaurants).	

Given the heterogeneity of both economic and physical assets, each type of innovation district is likely to require markedly different approaches to growth and development.

Albeit in a nascent stage, the case of Ullandhaug Innovation District seems to align most closely to the last model of an *"urbanized science park"*. The area has a well-developed ecosystem for research and development with over 150 companies and 900 employees. Several anchor institutions exist, among them the International Research Institute of Stavanger (IRIS), the University of Stavanger (UiS) and Validé. Nevertheless, low levels of interaction between partners, distance to the city center and the lack of basic amenities pose challenges for the development of the area into a successfully urbanized science park.

Fostering the relationship between universities, the private sector and government lies at the core of the "triple helix" model of innovation. (Leydesdorff, 2000). In this view, while the university is the focal actor in the region, each institution may complement and augment the capabilities of the others, increasing the





overall innovative output of the region (fig. 1): universities generate basic research which is appropriated by firms through academic entrepreneurship and commercialization, firms attract and enhance skilled human capital, while local governments magnify the social returns of innovation through early-stage funding and supportive infrastructure (Cai and Etzkowitz, 2020).

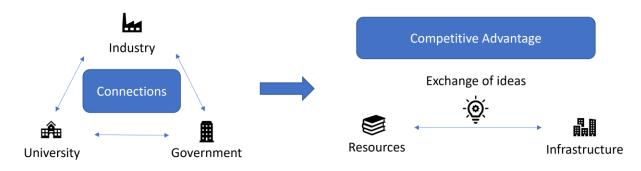


Figure 1: A diagram of the triple helix, and outcomes in terms of infrastructure, resources, and ideas.

It is also worth noting that competitive advantage refers to developing activities rooted in a region's capabilities. Those activities are competitive compared to others unrelated to the portfolio and know-how present in the region. Related activities, on the other hand, refer to the development of new activities that are somehow related to the capabilities of a region. The more related activities a region develops, the more likely it is to succeed because of existing conditions that ground them in the region. On the contrary, unrelated activities are less likely to succeed, but the benefits are more significant if a region manages to develop them with higher risk. This is because of the expansion of the portfolio of activities that this region can diversify (Balland et al., 2019)

A way to identify successful activities to develop and enhance in a region is through the Entrepreneurial Discovery Process (Foray, 2014). This process is driven by the engagement of all the stakeholders in a region to identify from a bottom-up approach those activities that, inclusively, have great potential and can yield a diversification of the region's portfolio. The process must be evidence-based and contain direct involvement by the local government, which acts as an enabler between the stakeholders.

In light of both the historic and geographical specificities of Ullandhaug as well as academic research on innovation districts, three core areas have been identified for a focused and strategic intervention: human capital attraction, commitment from partners and identity and communication.

To consider each of these areas, six cases have been examined and best practices in the three core areas extrapolated, supporting the formation of the key recommendations for the Ullandhaug Innovation District:

- The Seaport District (Boston, USA)
- Cortex Innovation Community (St. Louis, USA)
- Brunnshög (Lund, Sweden)
- Macquerie Park Innovation District (Sydney, Australia)
- White City Innovation District (London, UK)
- Brainport (Eindhoven, Netherlands)





# Policy recommendations

#### 1. Human capital attraction

#### **Key findings**

Physical planning

- Enhance the proximity of innovation actors through urban design
- Connect open spaces with high quality public realm and built structures
- Develop amenities which may be used spontaneously by local residents and knowledge workers
- Create open spaces that function as "living labs"

#### Social features

- Encourage the creation of networks between a wide demographic of actors
- Avoid exclusivity and enclaves in governance and design
- Activity management which enhances social capital

Attracting and retaining talent

- Entrepreneur, intrapreneur, and business support services
- Assist the entry and advancement of workers into firms through skills programs
- "Continuing education" for professionals

#### Description

1.1 Physical Planning

Urban innovation districts are composed of various urban components to support innovation activities. An innovation district requires **physical planning to create a productive and collaborative community**, involving various actors and built landscapes and infrastructures. The following recommendations are therefore proposed to the Ullandhaug Innovation District:

- Ullandhaug should provide a close physical proximity of actors, keeping in mind that different sectors have different perspectives of reasonable proximity.
- Joining built structures with communal spaces, such as parks, walking/cycling paths, etc. to appeal to the individual and invite the development of a living community.
- Incorporating amenities (groceries, restaurants, pharmacies, etc.) to stimulate chance encounters between knowledge workers and create vibrant urban spaces.
- The inclusion of common meeting spaces, both indoors and outdoors, to encourage networking and collaboration from ideation to planning to execution.

#### 1.2 Social features

**Networking and collaboration are key activities in successful innovation districts**. Such activities may require focused intention and promotion. Various innovation districts have different means to enhance active participation by the actors within. Given that the Ullandhaug Innovation District is yet in the early stages of development, the following recommendations are proposed:

- Continue to build a community involving a wide range of actors, from government, to university, to companies of various sizes and ages.





- Strategically plan networking opportunities for the variety of actors to promote collaboration and idea and/or knowledge exchange.
- The establishment of a managing body to complete the networking and event function is optional but suggested in the early stages of development.

#### 1.3 Attracting and retaining talent

Successful innovation districts generate highly skilled workers and attract talented individuals in to the area. The University of Stavanger plays an important role in producing new knowledge and translating such knowledge to the surrounding industry. Additionally, university-industry collaboration combines basic and applied knowledge, increasing absorptive capacity in industry, and industry-related skill to the academic. From another angle, the strategic support of new ideas increases university and industry spinouts, and new business opportunities in general.

- Apply government incentives for university-industry collaboration.
- Offer entrepreneurial support, particularly from the university.
- Large firms should support intrapreneurs to explore new products/services/technologies and expand market reach.
- Promote business support services (accelerators, incubators, etc.).
- Develop continuing education programs for professionals, to keep aligned with contemporary technologies and remain competitive.

#### 2. Commitment from partners

#### Key findings

Matching labour demand and supply

- Firm and university collaboration to understand the future demand for skills.
- Create pipelines from the university to firms in the innovation district.
- Engagement learning by doing opportunities for university students in firms

Planning and transport connectivity

- Commitment from government for flexible planning.
- Land use plans should support the innovation district for shared public spaces.
- Support improved public transport facilities to take advantage of nearby urban spaces.

Firm collaboration and open innovation

- Firms should engage in knowledge sharing and open innovation.
- Stakeholders share their demands for the co-creation of spaces.

#### Description

2.1 Matching labour demand and supply

As the key supplier of skills in the region, a commitment from the university should be sought to expand collaboration efforts with firms in the innovation district to **meet their** *existing* **and** *future* **demands for skills**.





The university is the primary supplier of skilled workers in the region. It is important that at least a subset of the skills and research generated at the university are sufficiently related to the activities at local firms. If the capabilities of the university and the local firms are too distant, the innovation district may suffer from skill mismatches. Skill imbalances in the local labour market will likely result in innovation outcomes which are sub-optimal. Mismatches between the skills acquired in higher education and those required by local employers may encourage skilled graduates to migrate away from the area or push graduates into work which underutilizes the skills acquired in university. Likewise, firm creation is also more likely to occur in areas which are related to the existing composition of skills in the local area.

The proximity of actors allows for easy integration between the university and industry, collaboration between these actors should be encouraged. This approach should balance formal course offerings as well as learning by doing, and experience-based knowledge development, advancing practical skills and tacit knowledge. There are several ways this may be achieved, including internship or 'sandwich year' programs in which students undertake a formal period of work experience as part of their course; firm involvement in courses through project assignments; regular seminars and conferences involving innovation district firms such that academics are aware of how they can align with the competences at local firms.

- The university has a crucial role in producing skilled graduates with the necessary competence for local firms.
- Close integration between the capabilities of firms and course provision at the university is an important component of ensuring the innovation district is an attractive destination for university graduates (Petruzzelli, 2011; McGuinness, Pouliakas and Redmond, 2018).
- The innovation district should facilitate complementary relationships between the university and firms with a focus on course provision and opportunities for students to acquire experience in local firms.

#### 2.2 Planning and transport connectivity

The second commitment we identify is from local government actors to engage in flexible planning and transport policies which **support mixed-used urban growth in Ullandhaug and high connectivity with the surrounding urban areas**.

Urban space and close connectivity to city spaces distinguishes an *innovation district* from an *innovation park*. Innovation districts characterized by attempts to co-locate innovation firms and infrastructure within vibrant mixed use urban spaces (Katz and Wagner, 2014). This contrasts with typical business park design principles, which have prioritized single-use office buildings in low-density areas removed from the city center. Such spaces have become increasingly critiqued due to unsustainable land use and their 'soulless' and 'place-less' nature as they lacked a public realm which may be spontaneously used for gathering and shared cultural activities (Le Tellier et al., 2018; Friedmann, 2010).

Ullandhaug is geographically peripheral to the city centre and relatively sparse in terms of the density and diversity of land use. Density is a supporting factor in the establishment of social networks between colocated actors, with evidence linking denser urban areas to a higher likelihood of firms patenting, higher incomes for workers and greater firm productivity (Duranton and Puga, 2020). It is increasingly found that





cities may *substitute* for a lack of local density through greater connectivity to urban centres through public transport networks, thus suggesting that there may be large returns to improving the accessibility to urban areas. This is further supported by research on the usage of Australian innovation districts, with evidence that people rarely choose to live and work in.

- The innovation district must focus on creating vibrant, mixed use urban spaces.
- Ullandhaug Innovation district should take advantage of city spaces and offer amenity, density, and infrastructure benefits.
- Efforts to integrate transport and social networks with nearby cities can exploit the advantages of large labour markets, urban amenities, and larger firms associated with urban areas.
- The current transport connections between the innovation district and Stavanger city centre require improvement, and more frequent direct bus routes should be prioritized.

#### 2.3 Firm collaboration and open innovation

Innovation districts can maximize the innovative potential of local stakeholders by **facilitating collaborative and cross-boundary activities which promote the sharing of ideas between firms**. Firms which choose to locate in the innovation district should commit to engaging in open innovation practices such as the use of shared 'innovation spaces' and other knowledge sharing activities. Whereas the university has a knowledge base and set of expertise which is far broader than any single, specialized firm will be able to comprehend, firms should engage with new research and ideas which are generated at the university.

The innovation district governance should seek to: establish knowledge sharing activities such as conferences and networking events; prioritize spaces in which chance encounters can take place in the physical design of the innovation district; invite firm stakeholders into governance activities; open engagement opportunities amongst firms and the university.

- Firms and innovation district governing bodies must commit to encouraging knowledge exchange between firms and sectors.
- Firms and knowledge workers should be consulted closely with the design of innovation spaces.
- The university may act as a source of inter-disciplinary knowledge for firms seeking to move into new areas (Tidd and Bessant, 2020).
- The innovation district should encourage firms to exploit and appropriate the research generated at the university in commercial settings.
- Innovation districts are a prime location to foster university spin outs, creating unique market opportunities for emerging technologies.

#### 3. Identity and communication

#### Key findings

Avoid "Silicon Somewhere"

- Create a unique and consistent identity.
- Realize and augment the existing capabilities and attributes of Stavanger and Ullandhaug.





Place-making and urban space

- Prioritize multi-use urban spaces to maximise new ideas, safety and community wellbeing.
- Urban design principles should embrace density, public accessibility, and connectivity.

Flexibility and co-creation

- Engage in constant consultation and dialogue with local stakeholders.
- Involve citizens into the design process recognise and cater for public needs.
- Physical integration with existing neighbourhoods.

#### Description

3.1 Avoid "Silicon Somewhere"

As an emerging innovation district seeking to position itself both locally and internationally, **Ullandhaug must build a unique and consistent identity.** This means avoiding the "Silicon Somewhere" pitfall, whereby local authorities attempt to imitate a limited number of alleged success stories such as Silicon Valley by blindly copying best practices and disregarding the importance of context (Hospers, G., 2006). At best, such practices should be seen as a source of inspiration, not a formula for success. Instead, scholars in the economic geography field have long stressed the importance of building upon unique, place-based conditions in order to truly stand out and gain competitive advantage.

The identity should encompass the districts' current abilities and activities. This task may appear more challenging when the local clusters are not closely related or well-integrated. Yet, in Barcelona's notable 22@ district, for instance, the five leading urban clusters – energy, medical technologies, ICT, media and design – are brought together under a shared agenda, that is finding new urban solutions by generating economic activity with high added value and improving the quality of life for citizens. Similarly, Lunds' former innovation district, Medicon Village, managed to build an identity around "health and well-being" despite combining food research, pharmaceuticals, biotech, agricultural and solar technologies. Today, the new Brunnshög Innovation District has centered its' identity around materials – which range from textiles, to packaging, to solar panels.

- The innovation district should present unique offerings, creating a district that belongs nowhere else.
- Ullandhaugs' identity should be inclusive, acknowledging the diversity of activities present in the area. Ullandhaug should brand itself based on its' strengths, both those of today and tomorrow, using a consistent thematic.

#### 3.2 Place-making and urban space

Density and the provision of mixed-use spaces in Ullandhaug is important to generate the amenity benefits associated with innovation districts. As a result, planners should **aim to create dense, mixed-use neighbourhoods.** Often, innovation districts extend more than one type of amenity types, increasing with age. New innovation districts have a tendency to focus on nature (such as botanical gardens, forests, parks, etc.) and transport (car charging lots, bus stations, taxi stands, etc.)





Based on the above research, we propose the following commitments needed from local government and planners involved in the innovation district:

- Transport planning should prioritize the provision of rapid public and active transport connections between Ullandhaug and the surrounding urban areas of Stavanger and Sandnes with the aim of creating closer integration between the innovation district and urban areas.
- Local government actors should recognize the innovation benefits originating from density, public realm improvements, and mixed-use neighborhoods.
- Planning policy should exhibit flexibility in the development of public spaces and create social spaces for knowledge workers.

#### 3.3 Flexibility and co-creation

The involvement of local stakeholders in **the co-creation of a shared vision for the district is also critical.** Ullandhaug's brand can only be consistent if all relevant parties are included in the process and take ownership of its identity. This includes not only entrepreneurs and researchers, but also local residents and civil society at large.

The top-down nature of planning policies often fails to understand the needs of knowledge workers and civil society as the main stakeholders and users of the innovation district. Even in the instance that planners can understand the basic needs of the end users, where stakeholders feel new developments are *imposed* on them, they are less likely to engage with the spaces and will be more resistant to development in the area (Bisschops and Beunen, 2019). For this reason, local government should also exercise flexible and bottom-up planning principles in the development of Ullandhaug to maximize the density and diversity of urban spaces (Desfor and Jørgensen, 2004). Indeed, the principles of co-creation and social inclusion are increasingly emphasized in urban design and planning. Co-creation is a design philosophy which encourages the involvement of end-users in the design process and is thought to not only foster greater social acceptability of new spaces, but it is also a tool to establish relationships and foster closer collaboration between otherwise disparate stakeholders.

- Planners are encouraged to engage in bottom-up co-creation with local stakeholders in the design and land use of proposed spaces in Ullandhaug.
- Planners and local government officials should engage in ongoing and iterative consultation with local stakeholders including knowledge workers, firms, and residents.

# Conclusions

Innovation districts are emerging in various cities around the world. Ullandhaug has accumulated a mixture of actors, from government to education to business, in order to stimulate the local economy via innovation-led growth. The policy framework provided in this brief, focuses on 3 key and inter-related areas: human capital attraction, commitment from partners, and identity and communication. The recommendations rendered provide guidance for the Ullandhaug Innovation District during the planning stages of its' development.





Attracting, developing and retaining human capital requires planned efforts from all angles. As a mixture of actors are already in place in Ullandhaug, efforts and opportunities for engagement are recommended. Such opportunities require appropriate physical planning, as well as social planning. The University of Stavanger plays an essential role in human capital development and retention. By offering educational programs relevant to the existing and future opportunities in Stavanger, the likelihood of the students engaging in professional careers in Stavanger, and in the related activities, is increased. Support for entrepreneurial activities should be offered both within and outside of the university, as student projects develop into new businesses.

Successful innovation districts are frequently underscored by an institutional structure characterized by bottom-up modes of governance, co-creation with local government actors, and shared mission-oriented objectives with local stakeholders. Buy-in from local stakeholders is critical to successful innovation district governance, who should advance policy-configurations based on mutual complementarity and reinforcement. In supporting activities that stimulate networking, new ideas emerge. The innovation district should create formal ties to science parks and clusters in the region and encourage informal activities amongst them. Such efforts include physical planning, in creating physical formal and informal meeting spaces, as well as socially organized networking events. To increase effectiveness, it is pertinent to enhance local modes of transport – improving access to the city, the airport, and making movement within the district easy.

The identity of Ullandhaug should be built on the existing clusters and capabilities of Stavanger and aim to be a standout innovation community within its' defined theme. The development of the innovation district should be with the user in mind. The needs of the individual, both professionally and personally, should not be assumed, but instead the district should emerge from co-creation, in order to create an inviting and pragmatic atmosphere. Importantly, it is recommended that the district is integrated with the surrounding neighborhoods.

Ullandhaug Innovation District has a unique opportunity to adopt a strong image and position itself as a key destination for success.

# Recommended sources

Balland, P. A., Boschma, R., Crespo, J., & Rigby, D. L. (2019). Smart specialization policy in the European Union: relatedness, knowledge complexity and regional diversification. *Regional studies*, 53(9), 1252-1268.

Bisschops, S. and Beunen, R. (2019) 'A new role for citizens' initiatives: the difficulties in co-creating institutional change in urban planning', *Journal of Environmental Planning and Management*, 62(1), pp. 72–87.

Cai, Y. (2020). 'Innovation in Innovation': A Review of Henry Etzkowitz and Chunyan Zhou, The Triple Helix: University–Industry–Government Innovation and Entrepreneurship Routledge, Abingdon, 2017, 328 pp.

Clarysse, B. et al. (2014) 'Creating value in ecosystems: Crossing the chasm between knowledge and business ecosystems', *Research Policy*, 43(7)

Desfor, G. and Jørgensen, J. (2004) 'Flexible urban governance. The case of Copenhagen's recent waterfront development', *European Planning Studies*, 12(4), pp. 479–496.





Duranton, G. and Puga, D. (2020) 'The Economics of Urban Density', *Journal of Economic Perspectives*, 34(3), pp. 3–26.

Esmaeilpoorarabi, N. et al. (2020). How can an enhanced community engagement with innovation districts be established? Evidence from Sydney, Melbourne and Brisbane, *Cities*, 96

Foray, D. (2014). Smart specialisation: Opportunities and challenges for regional innovation policy (pp.25-30). Oxford: Routledge.

Friedmann, J. (2010). Place and place-making in cities: A global perspective. *Planning Theory & Practice*, *11*(2), 149-165.

Hospers, GJ., Desrochers, P. & Sautet, F. (2009). The next Silicon Valley? On the relationship between geographical clustering and public policy. *Int Entrep Manag J* 5

Hospers, GJ (2006). Silicon Somewhere? Policy Studies, 27:1, 1-15.

Katz, B & Wagner, J. (2014). The Rise of Innovation Districts: A New Geography of Innovation in America. *The Brookings Institution.* 

Le Tellier, M., Berrah, L., Stutz, B., Audy, J. F., & Barnabé, S. (2019). Towards sustainable business parks: A literature review and a systemic model. *Journal of cleaner production*, *216*, 129-138.

Leydesdorff, L. (2000). The triple helix: an evolutionary model of innovations. *Research policy*, 29(2), 243-255.

McGuinness, S., Pouliakas, K. and Redmond, P. (2018) 'Skills Mismatch: Concepts, Measurement and Policy Approaches', *Journal of Economic Surveys*, 32(4), pp. 985–1015.

Petruzzelli, A.M. (2011) 'The impact of technological relatedness, prior ties, and geographical distance on university– industry collaborations: A joint-patent analysis', *Technovation*, 31(7), pp. 309–319.

Taecharungroj, V., & Millington, S. (2022). Amenity mix of innovation districts. *Journal of Place Management and Development*, (ahead-of-print).

Tidd, J. and Bessant, J.R. (2020) *Managing Innovation: Integrating Technological, Market and Organizational Change*. John Wiley & Sons.

Yigitcanlar, T., Adu-McVie, R., & Erol, I. (2020). How can contemporary innovation districts be classified? A systematic review of the literature. *Land Use Policy*, *95*, 104595.

## Appendix

District	Attracting human capital	Commitments partners		Distinction/unique identity; communication marketing	&
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Seaport, Boston	<ul> <li>Partnered with a local real estate agent to bring in a non-profit accelerator</li> <li>Developed InnoHousing units, which are smaller with shared kitchens and communal living spaces to make it more affordable</li> <li>Intergenerational Homeshare: With the Elderly Commission and Nesterly, offered affordable housing to graduate students while helping older adults stay in their homes by pairing them as roommates.</li> <li>Connected well to downtown Boston</li> </ul>	<ul> <li>District hall was built to foster collaboration</li> <li>Cooperation with universities, state and federal government, and present companies in the area.</li> <li>The district was introduced to a branch of Babson College.</li> </ul>	<ul> <li>District hall and the events held there played a major role in framing the vision</li> <li>Marketed as a '24*7 neighborhood'.</li> <li>On the Boston Government's website, they asked feedback from citizens to innovate the city: "Do you have an innovative idea to improve the city? Let us know through email or schedule an in-person brainstorm during upcoming office hours. We host 30-minute blocks every Tuesday, from 2 - 5 p.m."</li> </ul>
Cortex Innovation Communit y, St. Louis	<ul> <li>Concentrating on nimbler, more flexible firms and entrepreneurs in the early stage even if it was short term.</li> <li>Cortex works closely with the St. Louis Agency on Training and Employment (SLATE) to connect employers with qualified candidates.</li> <li>'Entrepreneur Boot Camp' with hands-on learning, networking, and mentoring for first-time/early entrepreneurs</li> </ul>	<ul> <li>Developed a partnership with one large firm and built around it.</li> <li>To combat lack of private lack of private development, mixed- use development was encouraged create "a true live/work/shop area that incorporates office/research, retail, hotel, and residential uses"</li> <li>flexible office, lab &amp; coworking space for startups &amp; small businesses</li> </ul>	<ul> <li>Live-work-play governance model</li> <li>Marketed as 'The future of the world is at stake: You can totally be part of the team that saves society"</li> <li>Venture Café: Thursday Gathering brings 400-600 people to Cortex to learn &amp; engage with entrepreneurs every week</li> </ul>
Brunnshög , Lund	<ul> <li>New (centralized) district is being built for easy mobility and a healthy lifestyle (ex. limited car traffic)</li> <li>Smart living spaces (using green energy to lower energy costs)</li> <li>A system that supports entrepreneurship (&amp;</li> </ul>	<ul> <li>First developed in cooperation between university, government, and key industry players (then AstraZeneca)</li> <li>Grew to encompass Science Park and 2 major science facilities</li> <li>New district being developed in</li> </ul>	<ul> <li>Efforts are focused. A district can be many but marketed as one. In the past Lund focused on "health and well-being" (life science, food research, diagnostics, pharmaceuticals,</li> </ul>





Macquerie	intrapreneurships & spinouts) - Support for new projects & collaborations - Urban green and blue	cooperation with university, government, and key industry (smart transport, housing development, entrepreneurship hub) - Efforts to leverage multi-sector partnerships - Multiple industry	<ul> <li>biotech, agricultural technology).</li> <li>Today Lund is focused on materials (from textiles to solar technologies)</li> <li>Marketing focused</li> </ul>
Park Innovation District, Sydney	<ul> <li>Orban green and blue infrastructure</li> <li>Built to encourage connectivity and mobility with other innovation districts</li> <li>Spatial layout design encouraging open innovation system within the innovation districts</li> </ul>	clusters: Telecommunications, medical & pharmaceutical, industrial & technology, digital, education & research Stakeholder-led, not- for-profit collaboration	<ul> <li>Warketing focused on connectivity, existing success stories, infrastructure, future housing options</li> </ul>
White City Innovation District, London	<ul> <li>University spinouts and early-stage biotechnology firms. Specialisation in biotechnology to match Imperial College's competences.</li> <li>Scale-up and collaboration spaces.</li> <li>Research commercialization (more easily move from university to industry)</li> </ul>	<ul> <li>Built out of the new Imperial university campus.</li> <li>Creation of biotechnology lab infrastructure</li> <li>Alignment with local government development plans</li> </ul>	<ul> <li>Place making through iconic architecture, and new urban space.</li> <li>Infrastructure and connectivity to existing urban areas in London.</li> </ul>
Brainport Eindhoven	<ul> <li>Attraction of talents through TU Delf and TU Tilburg. Also, the role of Eindhoven University.</li> <li>Already a pole of human capital because of Phillips. Major patent contributor of the Netherlands, and one of the leading regions in Europe.</li> </ul>	<ul> <li>Built upon the commitment of 21 municipalities, Phillips, DAF and Vlisco, along with the entire supply chain of those companies. Strong joint efforts between these stakeholders.</li> <li>Academia was also present. The Technological University of Eindhoven is the main one, but also some participation of the Technological University of Delf.</li> </ul>	<ul> <li>Urban space concentrating the leading firms (Phillips, DAF) and the TUe campus, in the city centre.</li> <li>Identity based on Phillips model (the leading company) and also the technological –high- tech ecosystem of the region.</li> <li>Strong communication on the societal impact and the close collaboration between the partners.</li> </ul>