



Lambeth

Catalysing opportunities for inclusive growth from SC1 in Lambeth

Assessing the options for community
engagement from Lambeth's new life sciences
innovation centre.

FINAL REPORT

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Catalysing opportunities for inclusive growth from SC1 in Lambeth

Paul Marshall

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Pragmatix Advisory Limited. enquiries@pragmatixadvisory.com. 020 3880 8640. pragmatixadvisory.com
Registered in England number 12403422. Registered address: 146 New London Road, Chelmsford, Essex
CM2 0AW. VAT Registration Number 340 8912 04

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Context

Pragmatix Advisory was commissioned by the London Borough of Lambeth to explore the employment and skills opportunities for residents arising from the proposed new life sciences innovation centre in the Urbanest Arches.

The aim was to arrive at a practical plan and priorities for the borough in terms of how the innovation centre could be used to support skills and employment activities designed to improve local residents' access highly-skilled, good quality life sciences employment opportunities.

This section provides a background to the research undertaken.

Urbanest Arches offers a trailblazing opportunity

Lambeth Council is in the development stage for a life sciences innovation centre, piloting some of the approaches that will be used to develop the SC1 life sciences cluster.

Linked to the Royal Street development scheme, the centre is designed to provide five core benefits:

- **Provide opportunities to trial approaches to engaging communities and affordable workspace** - It provides a unique opportunity to test and develop approaches to affordable workspace provision and engaging communities in the opportunities presented by this high growth part of the local and national economy. This is particularly important given the lack of suitable health and life science-specific space within London.
- **Address inequality** - Significant inequality exists in Lambeth, and in the life sciences sector. For example, black residents are twice as likely to be economically inactive compared to white residents in the borough. The proposed activities in this report will support job creation in the borough. Skills and employment and community engagement activity will be designed to create pathways for residents to enter this sector to address underrepresentation and engage communities with opportunities at all stages. Critically, the employment and skills programme, and shared working space, will also enable the council to gain a deeper understanding of the skills needs within the life sciences sector.
- **Support growth of the life sciences sector** - The project will help put the Waterloo MedTech cluster 'on the map' in the immediate term, increasing the chances of long-term growth and success of the cluster. By both attracting new life science businesses to Lambeth and support those grown within the Borough's boundaries, it will play a crucial early role in building on MedTech successes in the area and will grow the life sciences entrepreneurial community with offering space, peer-to-peer support and access to clinicians and talent ahead of major prospective developments.
- **Optimise the local benefits of proposed developments** - It will help seed the health and life science ecosystem that is being proposed for the Royal Street site, in advance of the potential development at this strategically important location. It is also intended to be a place to co-locate proof-of-concept community engagement programmes that are designed to increase awareness and access to employment and skills opportunities for Lambeth residents in the life sciences.
- **Address a primary barrier for growth of the sector** - Specifically, the project will help address the lack of readily available, cost effective and fit for purpose life sciences space in London, ahead of a pipeline of space becoming available in Waterloo in the medium to long term. MedCity in 2021 calculated that there was demand for over 500,000sq.ft of life sciences space in London, with over 270,000sq.ft needed by 2024.

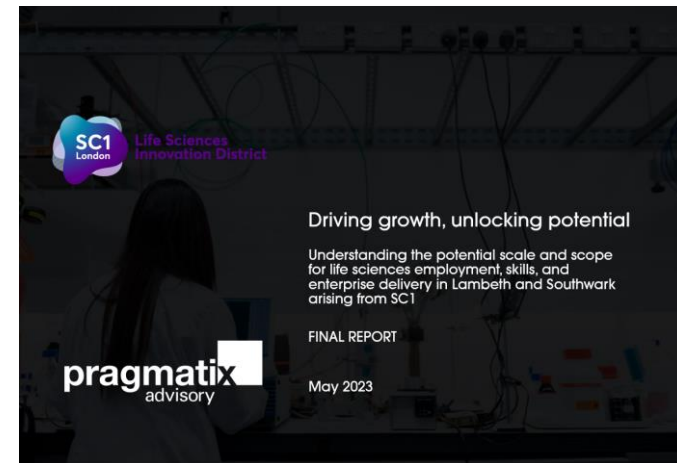
SC1 will be transformative for Lambeth

The recent Pragmatix Advisory report, *Driving Growth, Unlocking Potential*, outlined the potential for the new SC1 life sciences innovation cluster to make a significant contribution to inclusive growth in Lambeth in the long term.

To realise this potential, the report outlined the importance of:

- Increasing levels of science capital within local communities and young people.
- Creating a community-employer engagement function that can drive meaningful 'outreach' (organisations going out into the community to deliver activities) and reduce reliance on 'inreach' (organisations inviting local residents to come to their locations for activities).
- Using that function to create and deliver a community engagement and outreach programme that enables local residents to see SC1 as part of their community.
- High quality life sciences-related information, advice and guidance supported by SC1.
- Creating life science working environments that are psychologically safe for local residents in terms of their design and decoration.

The proposed new life sciences innovation centre offers an important opportunity act as a focal point for many of the activities that would fall under the above recommendations.



Effective collaboration will drive success

Recommendation	Priority
Re-energise the work of the SC1 employment and skills strategy group as a delivery vehicle for these recommendations.	High
Partnership working to increase levels of science capital amongst the local community	High
Explore establishing an SC1-led flexi-job apprenticeship agency	High
Facilitate the creation of 'model' career pathways with associated qualification requirements	High
SC1 should create a community-employer engagement function drawing in expertise from its partners	Medium
Preparation and delivery of a local engagement and outreach programme	Medium
Careers leads and advisors should be upskilled on the routes into a life science-based career	Medium
Ensure the three hubs balance the need for a world-class life sciences environment with psychological safety for local residents	Medium
A 'Life Science Pledge' from businesses occupying the three hubs, along with those already part of the SC1 ecosystem	Low

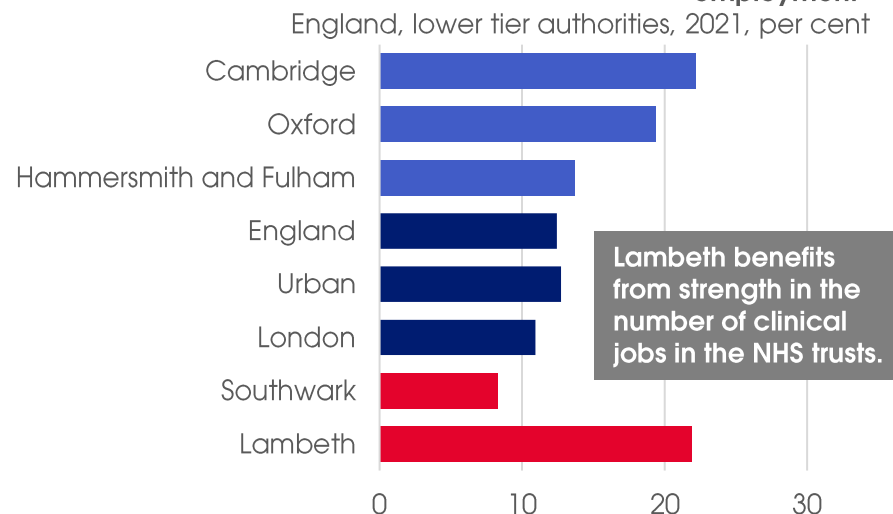
Lambeth already has significant numbers of jobs in health and science

But these figures are skewed by clinical jobs in the large NHS Trusts and academic roles at King’s College London that are largely confined to areas around the South Bank and Waterloo. It is expected that clinical roles will only form a small part of the life sciences opportunities available as SC1 develops and grows.

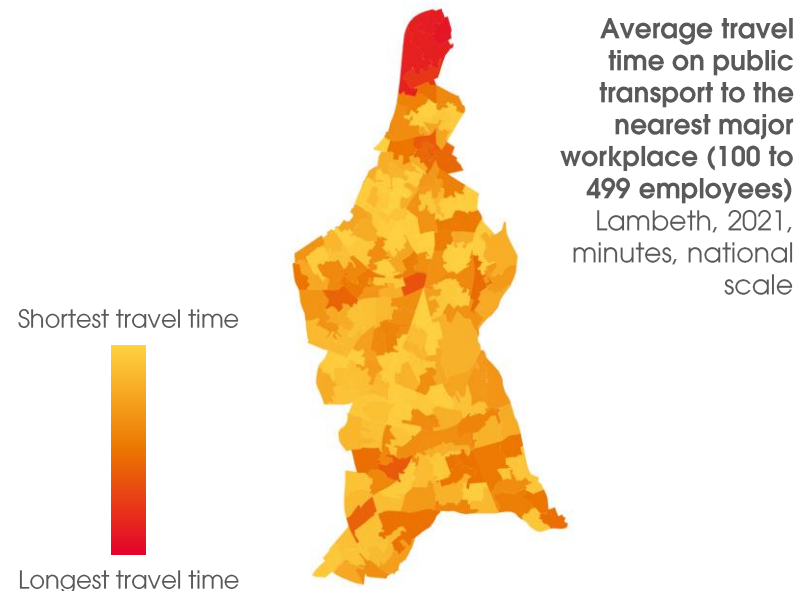
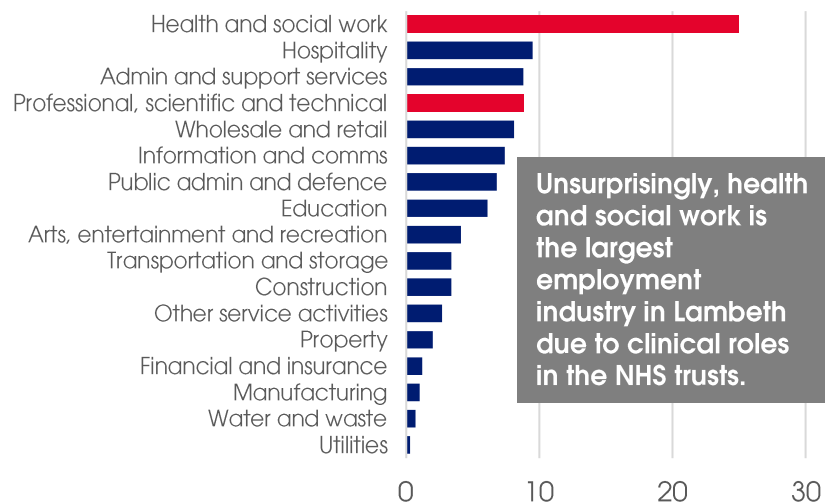
Travel poverty within much of the borough, however, means that they are inaccessible to many residents. For example, for a Streatham resident the cheapest journey to the South Bank by public transport is likely to take over an hour and involve three separate bus journeys.

It is therefore important that access to opportunities are more evenly distributed geographically and that local residents are able to access opportunities in locations that are closer to home and welcoming and familiar in nature.

Proportion of employees in health and life sciences employment*



Employee jobs by industry England, Lambeth, 2021, per cent



*see appendix for list of industries and SIC codes classified as 'health and life sciences'; Source: Office for National Statistics

Unemployment in Lambeth is higher for ethnic minority residents

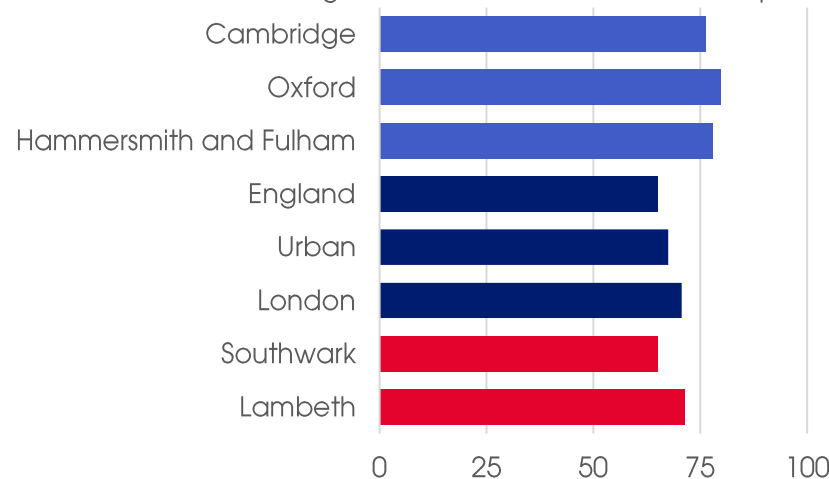
Lambeth has an unemployment rate lower than the London average, but ethnic minority residents within the boroughs are twice as likely to be unemployed than their white counterparts. The unemployment rate for ethnic minority residents is two percentage points higher in Lambeth than across London as a whole.

In addition, there are around three in ten economically inactive residents who are classified as 'long-term sick'.

The proposed innovation centre, therefore, offers a real opportunity to work with residents from the Black community, in particular, to test initiatives that can increase the attractiveness and accessibility of higher skilled, good quality opportunities within the life sciences.

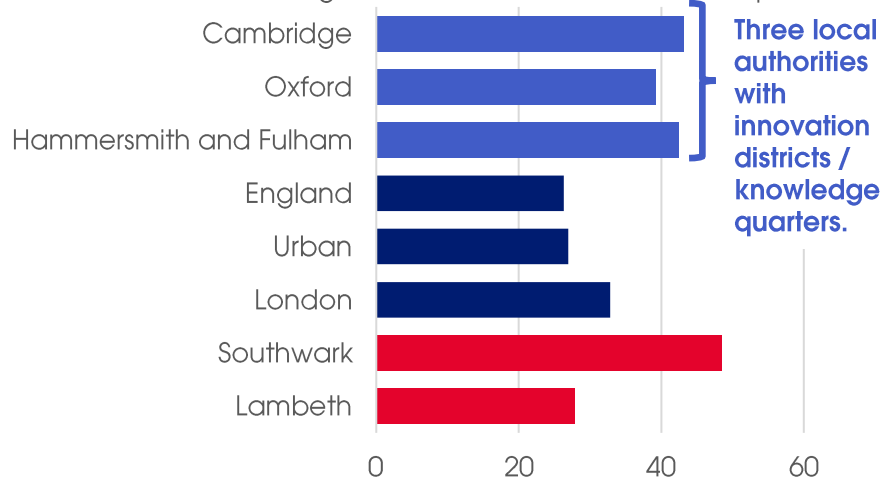
Proportion of ethnic minority population aged 16 to 64 in employment

England, lower tier authorities, 2022, per cent



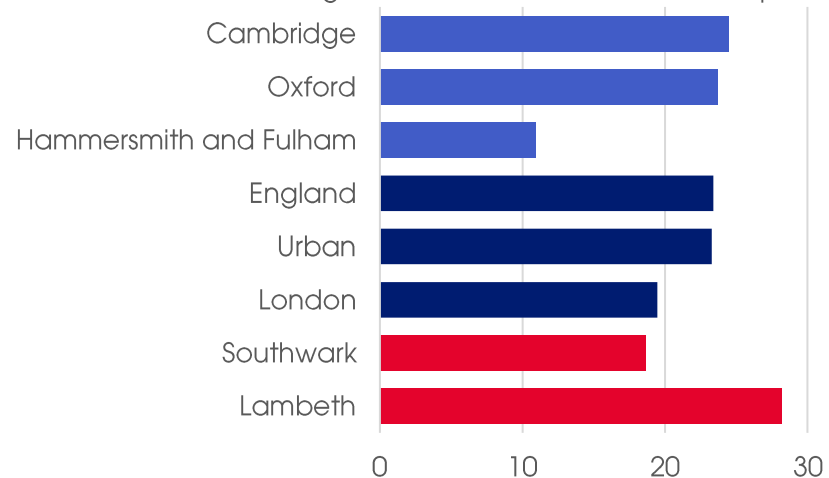
Proportion of those who are economically inactive that are students

England, lower tier authorities, 2022, per cent



Proportion of those who are economically inactive that are long-term sick

England, lower tier authorities, 2022, per cent



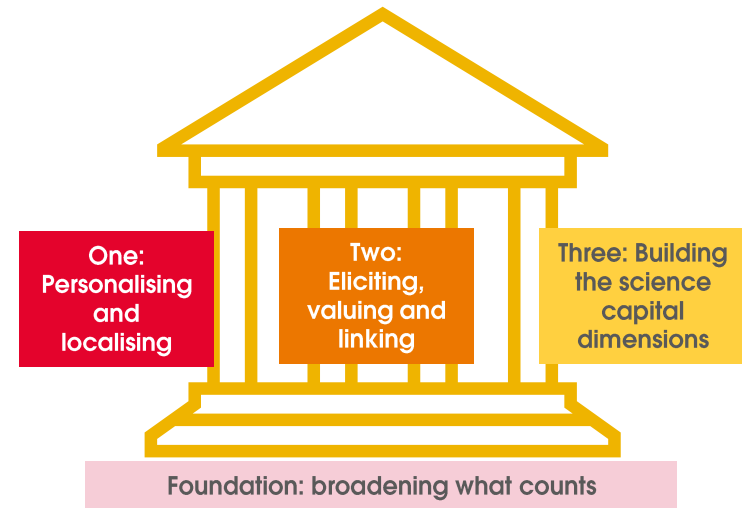
Boosting the science capital of young people would improve equality and diversity in life sciences

Science capital is a science-related form of social and cultural capital and is based on a set of resources that helps individuals engage and identify with science. It consists of eight dimensions broken down into four main categories: science-related knowledge, attitudes and values, experiences and activities, and contacts or connections.

It includes the extent to which a young person sees science as relevant to everyday life; whether they have an understanding of the utility and broad application of science; the extent to which they consume science related media; how often they participate in science learning out of school; the extent to which their family members have science related skills, jobs and interests; if they know people in their wider social circle that works in a science-related role; and how often a young person talks about science outside of school.

Eight dimensions of science capital

1. Science literacy
2. Attitudes, values and dispositions
3. Knowledge about transferability
4. Science media consumption
5. Participation in out-of-school science learning contexts
6. Family science skills, knowledge and qualifications
7. Knowing people in science-related roles
8. Talking about science in everyday life



The science capital teaching approach
United Kingdom, 2015

Connecting scientists and residents will deliver a step change in science capital

The innovation centre will be an effective location to hold science capital-raising activities. In particular, activities within the centre can help with changing attitudes and dispositions to healthcare and science amongst the Black community where there are significant levels of mistrust and distrust of both. Enabling young people to meet life scientists working in the centre will also help build an understanding of the breadth of roles within the life sciences and help improve the attractiveness and accessibility of a career in science. Having activities targeted at adult family members will help improve their science capital and confidence in being able to talk about science topics at home.

The design of the centre will therefore need to reflect a range of user perspectives for it to be an effective venue for these activities.

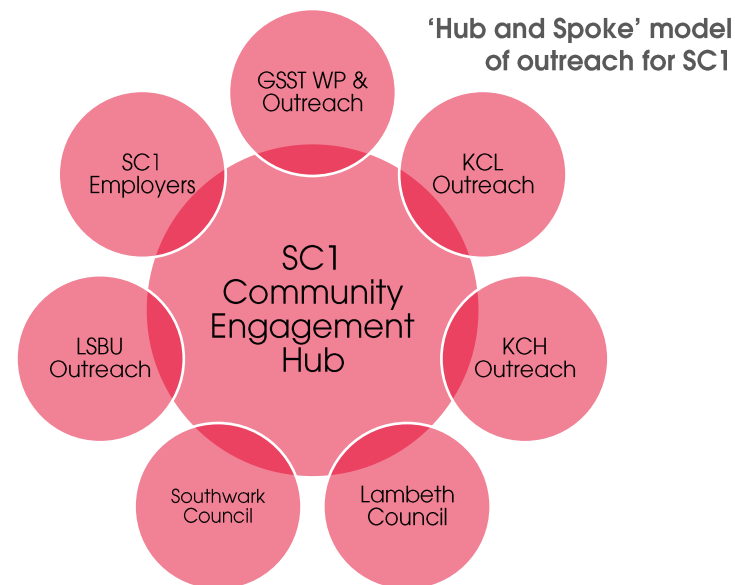
The Lambeth innovation centre could act as a hub for employers, educators and communities

Employers want to engage in the community, but don't know how; the community wants inclusive growth but doesn't know how to secure employer support. There is a unique opportunity for SC1 to act as a gateway into the life sciences for local education and community organisations who want to establish the employment and skills pathways needed for residents to access good quality, higher-skilled opportunities.

Each SC1 partner already has a range of successful community engagement activities, and the innovation centre in Lambeth could act as the location for the proposed hub where this knowledge and experience could be used to support employer engagement. Access activities would then be co-designed with employers and partners to deliver the maximum benefit, with engagement from stakeholders being coordinated by the centre to ensure an efficient use of resources.

SC1 community engagement activities

- Pop-up science demonstrations at existing community events and festivals
- Dedicated programme of activities in the community during British Science Week
- Co-created and co-led community research projects focusing on the health and life sciences
- School visits for events in the three SC1 hubs and the life sciences innovation centre led by the tenants
- SC1 support for community wellbeing initiatives
- Talks on popular science topics to community and youth groups by students and SC1 employers
- Support and sponsorship for community wellbeing initiatives for both adults and young people



If SC1 is to influence inclusive growth, it needs to be seen as beneficial for all

The current positioning of the benefits arising from SC1 for Lambeth residents appears to be largely health-related with economic benefits through access to good quality, highly-skilled opportunities being secondary. It is therefore perceived to be more about outsiders coming in to use the borough as a lab rather than supporting the local population to flourish and thrive.

SC1 should therefore work with the borough and relevant community organisations on a comprehensive engagement and outreach plan that enables local residents to feel that SC1 is part of their community. This programme will combine a range of activities such as science fairs and shows and guest teaching in schools and colleges, as well as visits to promote awareness of the hubs. The proposed innovation centre in Lambeth could act as an excellent focal point for these activities.

Effective careers guidance would positively influence views of life science pathways

Gaps in information, advice and guidance are preventing young residents from accessing careers in the life sciences. Quite simply, for many young residents they do not have access to the information or guidance needed to positively influence their view of a career in the life sciences. This has been reported as being due to careers leads being uninformed about the range of relevant options available at post-sixteen.

Effective careers advice and guidance would enable more young people to see how their interests and skills map across to multiple opportunities within life sciences' employers within SC1 or elsewhere within London or the United Kingdom. The proposed innovation centre would be an ideal venue for careers experts and life sciences employers to interact and build the relationships needed for effective careers support.

Actions for SC1 to improve psychological safety

- Improving representation of under-represented groups in computer generated images of new buildings and spaces
- Active engagement with under-represented groups in the design process
- Reflect the local community through artwork, role model stories and room naming
- Involve architects and/or designers from local communities of colour
- Involve specialist organisations like *Beyond the Box*
- Include subtle and inconspicuous experiences of people of colour in all their diversity

Personal guidance

- Equip Careers Advisers with life sciences careers posters, flyers and resources and ensure these are available in any careers areas.
- Check that Careers Advisers are aware of the local STEM Ambassador Hub Network and has access to STEM volunteers to support with careers interventions.
- Where possible, invite your Careers Adviser to join trips to life science employers, further education and higher education providers. This will help them to gain first-hand experience of local opportunities.
- Provide Careers Advisers with a record of the life science careers activities available so that they can be signposted as part of personal guidance sessions.
- Where possible, Careers Advisers should attend local careers networking meetings and life science-specific careers events

The innovation centre can help improve the perceived psychological safety of life science environments

Data shows that roles in the life sciences are predominantly occupied by white, upper middle-class males who create work environments that reflect their values, attitudes and previous work experiences. Whilst many spaces will reflect an international workforce, and therefore have some degree of cultural diversity, the kind of pristine, glass-fronted, airy buildings that signify a world-class working environment amongst such a demographic are often alien to those from disadvantaged communities of colour.

The innovation centre has a pivotal role to play in demonstrating that world-class life sciences environments can also be welcoming and attractive workplaces for those from communities of colour. This can be achieved through its design, decoration and how local residents are engaged in both.

Fab Labs & Makerspaces

This section provides an outline of, and case studies for, the makerspace or Fab Lab concept, which offers an excellent way of enabling the innovation centre to be firmly established as a community resource.

Makerspaces have multiple benefits

Fab Labs – digital fabrication laboratories – were set up to inspire people and entrepreneurs to turn their ideas into new products and prototypes by giving them access to a range of advanced digital manufacturing technology.

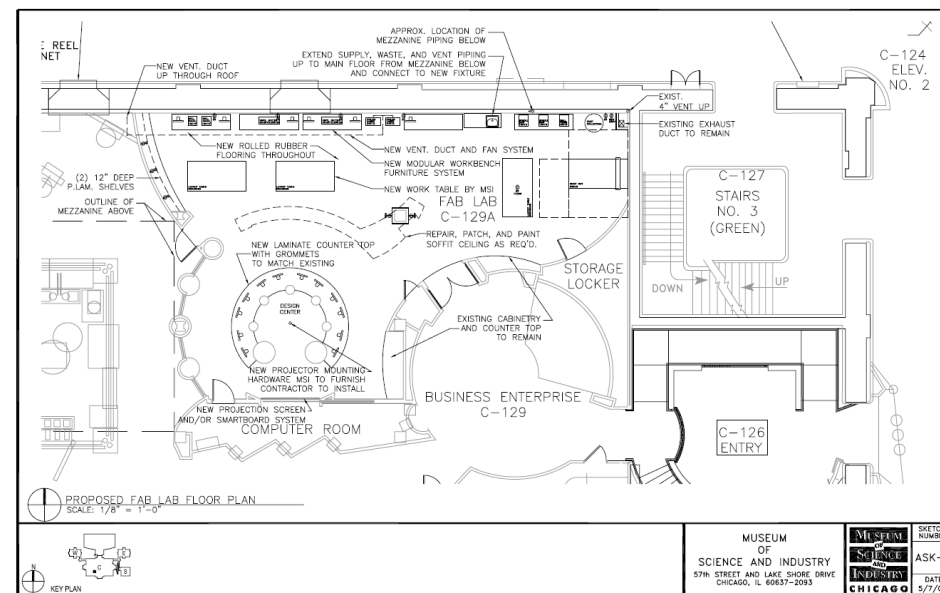
A form of makerspace, **Fab Labs** were conceived by inventor and scientist Professor Neil Gershenfeld at the Massachusetts Institute of Technology. His idea was a simple one: to provide the environment, skills, advanced materials and technology to make things cheaply and quickly anywhere in the world, and to make this available on a local basis to entrepreneurs, students, artists, small businesses and, in fact, anyone who wants to create something new or bespoke.

MakerHealth is a MedTech specific type of makerspace that also spun out of the Massachusetts Institute of Technology. MakerHealth Create provides the onsite and digital facilities to enable medical practitioners to go from idea to prototype. At the University of Texas Medical branch in Galveston, equipment includes a laser-cutter, 3D printer, bandsaw, belt sander and an array of tools, as are a chemistry lab, sewing machine and fluid management station for IV drips

A similarly equipped space within Lambeth’s life sciences innovation centre would draw in paying tenants who could use the equipment to grow their MedTech businesses as well as provide a platform for advanced manufacturing skills development and training for local residents.



MakerHEALTH®



Example community-focused Fab Labs

Soshanguve Fab Lab

- This fab lab is in a township in South Africa, just outside of Pretoria and is entirely about the community and the social engineering around the community.
- It started in a small community health center with a printing/resume service attached to it, which was run by a group of local youth called the Bright Youth Council.
- The print shop continues to provide printing and resume services but has now dedicated most of its computers to teaching children, teens, and adults how to use computers and how to design on computers.
- Once users have designed something that they want to fabricate, they walk next door to the fab lab, where a small team of technical gurus helps them learn the machines, the electronics and the fabrication processes and workflows.
- This lab has recently expanded their services to assist users in prototyping for small business startup ideas. The startup prototyping is organized as fee-for-service and there is significant demand for this kind of service in the township.
- It also plans to use the digital fabrication distributed education program Fab Academy, as an income stream to help sustain the fab lab operations.
- Fab Sosh currently get its funding from the government and from large manufacturing companies with facilities nearby that are interested in workforce development and in corporate social responsibility.

University of Nairobi Fab Lab

- This lab is about 3 years old and is the first fab lab to be integrated into a business incubator environment. It is situated on the University campus, but not associated with any one department, rather with the new Science and Technology Park initiative coming out of the government. The users are local inventors and entrepreneurs as well as recent University graduates from engineering.
- The fab lab is a terrific resource for the inventors and students to work on prototypes and ideas, and as importantly, to improve upon ideas already in process. This lab has about 8-10 small business ideas incubating. While only a few ideas originated in the fab lab, all of the inventors are improving their designs in the fab lab.
- The fab lab is also being used to train non-university people in advanced technical skills through Fab Academy. This lab is successful enough that the government wants to invest in a network of fab labs in this same context throughout Kenya.
- An interesting aspect of this lab is the relationship with the government, which backs the lab so far as to consider policy changes and supports to help it succeed, including import tariffs to protect businesses incubating out of the fab lab there.
- This lab is so far, entirely government funded, with plans to have the incubator take over financial support in the future.

Imperial College Invention Rooms

The Invention Rooms in White City is a space for the local community and Imperial College to come together in cutting edge facilities to collaborate on innovative and creative projects. Beyond the physical space, the Invention Rooms offers science pop-ups and events in the community using students and staff to engage and inspire local residents.

The idea behind the Invention Rooms is to inspire the next generation of inventors and entrepreneurs from within the local area. There are three unique immersive spaces, each with a different area of focus matched to the Invention Rooms' values:

- Make: The Dangoor Reach Out Makerspace
- Invent: Advanced Hackspace
- Community: The Interaction Zone

Advanced Hackspace

- Available to current Imperial College students and staff, the Advanced Hackspace brings together inventive minds from all backgrounds, disciplines and levels of expertise to collaborate, experiment and innovate.
- There are three purpose designed prototyping and fabrication spaces developed to complement each other and accelerate multi-disciplinary prototyping, making and collaboration:
 - Electronics and Digital Manufacturing Workshop
 - Biochemistry Lab
 - Mechanical Workshop

The Dangoor Reach Out Makerspace

- The Reach Out Makerspace is an innovative educational centre, dedicated to hands-on activities that engage students creatively in STEM. It has a variety of tools such as 3D printers, scanners, laser cutters, woodworking equipment and much more. This unique immersive environment provides young people with a space to experiment, design and innovate. Over 500 young people have engaged with the space since 2017.
- The Maker Challenge programme utilizes this space through the year for a non-residential opportunity to develop an idea and see it through to creation. Participants gain a range of skills covering both technical skills in how to use the equipment and soft-skills such as product development, teamwork, presenting and communicating. Priority is given to those young people local to White City. At the end of the programme, students display their project for their friends, teachers and families to see.

The Interaction Zone

- The Interaction Zone is an event space within The Invention Rooms that hosts community and college projects across the year, for local families, organisations and authorities as well as Imperial College departments, staff and students.
- The space is available to book for events and activities designed to engage the public around our core research areas of science, engineering, medicine and business.
- Priority is given to the events run by Imperial College's community engagement team and offers two meeting rooms (both with Teams/Zoom capability), free wif-fi and complimentary hot drinks. The facilities also include a community garden, a café and space for exhibitions, displays and events.

Potential innovation centre users

This section provides a series of personas for different potential users of the life sciences innovation centre. The intention is to demonstrate how the hubs might be used and the activities that are likely to need catering for within it.

Flexibility of space will be critical

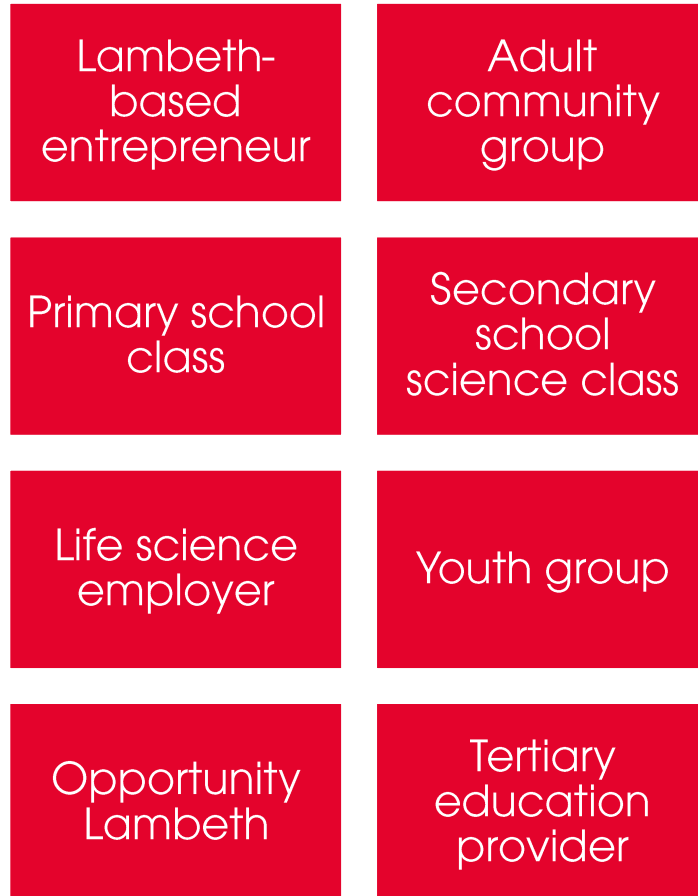
The proposed life sciences innovation centre will need a range of flexible use spaces

As a community hub, the design of the innovation centre will need to incorporate the needs of at least eight distinct groups of users. How these groups might use the spaces and facilities within the centre are outlined as personas in the following pages.

However, these spaces and facilities must also cater for the needs of the centre's tenants, which are likely to be mainly startups or early stage MedTech businesses. Indeed, there are benefits of the spaces and facilities being setup to cater for the tenants as their use for community-based activities will help immerse local residents and young people in a professional life-sciences environment and thereby improve feelings of psychological safety within similar environments over time.

One option to help address this would be to utilise a Lambeth-equivalent of the 'Camden STEAM pledge', which would commit the centre's tenants to a number of social value requirements like offering placements and internships as well as providing limited pro-bono technical support or demonstrations in the makerspace.

However, nevertheless, there is likely to be an expectation that the tenants will have a first call on facilities within the centre, which could erode the potential benefits of it as a venue for wider community engagement hub for supporting skills and employment activities. This is a particular risk for any activities that are intended to be run during working hours and could limit usage by schools or other education providers.



Potential community user groups for a life sciences innovation centre

Local bike parts entrepreneur

David is a Lambeth resident who is currently working as an administrator for a local estate agency but is passionate about cycling and has a design for a new, affordable aerodynamic wheelset. He doesn't have the resources to be able to buy the equipment he needs to prototype the wheelset and there are no rentable facilities within commuting distance, which has to be by public transport or bike. Once he knows that the product works, he has a contact at a manufacturing plant in Stevenage that can mass produce it for him.

As well as prototyping the new product, David needs a local professional workspace that he can talk to prospective investors and customers for his product and, ideally, a rentable desk that he can use between meetings or on his days off from his substantive job. The inclusion of access to cheap onsite refreshments and a kitchen would be required.

Local entrepreneur needs

- Accessible prototyping space with technical support and modern equipment such as 3D printers, scanners, laser cutters, metalworking equipment etc.
- Meeting rooms with high-quality AV and videoconferencing to hold in-person or hybrid meetings with investors, clients or suppliers
- Affordable desk space to rent by the day
- Event space for product launches or pitches
- Accessible opening hours including evenings and weekends
- Easily accessible location by public transport
- Welcoming but professional working environment
- Cost effective refreshment facilities and kitchen

Employer needs

- Rooms suitable for 1-1 or 2-1 interviews
- Easily accessible, clearly signposted location by public transport
- Outside space for breaks
- Close to a variety of catering outlets
- Event space for up to 50 people for careers talks, learning and development sessions or larger staff meetings
- Welcoming but professional working environment
- Comfortable and obvious reception area

Life science employer

Joy runs a small MedTech company that was spun out of Kings College London about five years ago. Whilst she has not taken space within the innovation centre, she has a number of contacts and partners who operate from it. Given the centre's location, it's life sciences' focus, and the size of her own offices, she would like to be able to use the space for interviews and meetings with job applicants, investors and customers. As such, she needs a prime location close to public transport (preferably the Tube) and suitable and obvious reception area.

Joy would also like a space that she can use for a conference she has organized for an emerging collaboration that could open up new growth opportunities for her company. She also knows of a larger life sciences business that is seeking a location for an offsite away day to discuss the next steps in the development of a new product that could use a similar space.

Youth group leader

Aisha is a youth group leader from Streatham who wants to find a new way of engaging the young people in her group, who are predominantly from communities of colour and disadvantaged backgrounds. The group has always been quite creative and Aisha would like to give them the opportunity to design and build an idea and, in doing so, help them with important technical and employability skills like teamwork, communication and leadership.

The youth group has very little funding, although they do have a small travel grant from a local foundation. They are looking for a welcoming venue with a Makerspace that they can book for a regular slot on a Wednesday evening. It is important that the environment is diverse and inspirational not overbearing or monocultural. As it's the Summer, it would be good to also have an outdoor space where the young people could socialize before and after the sessions.

Youth group needs

- Welcoming environment that reflects the lived experiences of the local community
- Easily accessible by public transport or cycling
- Dedicated indoor space with technical support for young people to use cutting edge technologies to turn an idea into a reality
- Outside space that reflects the local community
- Light, easy-to-find multi-purpose space for activities that could open up to the outside
- Indoor space that can be used for presentations or exhibiting young people's work
- Onsite complimentary refreshments

Adult community group needs

- Welcoming environment that reflects the lived experiences of the local community
- Makerspace facilities to support creative or crafting groups
- Multi-purpose indoor space that can be used for talks, presentations, films, activities, meetings and exhibitions
- Accessible by public transport
- Flexible, partly grassed outdoor area for meditation, pilates, Tai Chi or similar wellbeing initiatives.
- Refreshment facilities and access to small kitchen

Adult community group organiser

Leon runs an adult community group in Stockwell. Whilst the aim of the group is to reconnect local people with their heritage and generate a sense of pride in their local area, Clive sees it as a vehicle to improve the wellbeing of the local community. He is particularly conscious of the health inequalities found within the group and the deep distrust of the medical establishment.

Clive wants an easily accessible, psychologically safe location that he can use for a range of activities that could reduce this deep mistrust and the inequalities. The space needs to reflect the lived experiences of the group and offer opportunities for indoor and outdoor wellbeing-focused activities. Some of the group are artists and would like a location for a health-focused exhibition; others would like to put on a design-and-build programme to help develop new skills within the group's members and help their mental wellbeing.

Primary school teacher

Susan is a primary school teacher and has heard about how improving levels of science capital in young people can improve their life chances. She does not have a science background and is quite nervous about trying to engage her class in science-based activities, but she sees the opportunity to inspire and challenge her pupils.

Ideally, Susan would like a space where she can access expert educators and pre-defined science-based activity programmes suitable for primary-age children. It would need to be a secure, dedicated space where access was limited to her class and the leaders of the activities, and one that was not too 'officey'. Given the age of her children, toilets and the kitchen would need to be close by. An outdoor space would also be helpful as Susan would like to partner with other schools in her academy network on an end-of-term science-based fair.

Primary school needs

- Welcoming environment that reflects the lived experiences of the local community
- Multi-purpose space with AV facilities and space for at least 33 for talks by tenant scientists or academics, creative activities, or experiments.
- Supervised access to the Makerspace to work on small group projects.
- Secure outdoor space for multi-school science fair
- Access to a limited number of computers for research, design or online activities.
- Easily accessible hygiene facilities, e.g. kitchen, toilets.
- Easily accessible by public transport.

Secondary school needs

- Welcoming environment that reflects the lived experiences of the local community.
- Multi-purpose space with AV facilities and space for at least 33 for careers talks or presentations by tenants or academics, science-based activities, or experiments.
- Small rooms for careers or work experience interviews.
- Access to tenants for careers leads to help with improving information, advice and guidance.
- Supported access to the Makerspace to undertake science-curriculum based projects or experiments.
- Easily accessible by public transport.

Secondary school teacher

Ben is the Head of Science at a secondary school in Vauxhall as well as being one of the careers leads. He has also heard about the benefits of building science capital, which he feels will both reverse a decline in young people taking science as well as boost their life chances.

Like Susan, Ben would like access to educators and science-based programmes that support Key Stage 3-5, and for the educators or experts to reflect the communities his pupils are from. Having supported access to a Makerspace would be very attractive to support the new Science Club as well. From a careers perspective, having access to science-based employers who could offer support in terms of careers talks, mentoring, work experience or T-level placement opportunities onsite would be attractive.

Opportunity Lambeth advisor

Amani is an adviser at Opportunity Lambeth who has been asked to put together a life sciences offer that is similar to the regeneration and construction one currently in place.

She would like a professional venue to act as a new hub for the service close to a range of life sciences businesses to hold meetings with potential employers and members of the provider network. She would also like a multipurpose space including small interview rooms that can be used for basic employability skills training, small life science-related jobs fairs and interviews for job applicants or job seekers. The location should act as a 'honeypot' for job seekers and employers, offering the former a welcoming and multicultural space, and the latter a professional, visible and attractive professional environment. The use of offices or desks for advisors or tutors to use between sessions would also be helpful.

Opportunity Lambeth needs

- Welcoming environment that reflects the lived experiences of the local community
- Easy access to confidential small interview rooms
- Multipurpose space for fusion or functional skills training, life science sector jobs fairs, as well as group careers presentations, employer network meetings or employability skills sessions.
- Reception area space that enables confidentiality
- Easily accessible by public transport
- Offices for careers advisors, brokerage team officers or tutors to base themselves when delivering activities or engaging with life science employers.
- Accessible refreshment facilities onsite

Higher education needs

- Multipurpose space for delivering life sciences skills boot camps or employer-driven microcredentials, as well as holding clinical trial sessions or focus groups with research study participants.
- Small interview rooms for practice interviews, internship or placement interviews, apprenticeship tripartite meetings and 1-1 careers advice sessions
- Supported access to the Makerspace to enable students in relevant subjects access to cutting-edge facilities to design and prototype products
- Accessible office space for outreach and engagement teams to run activities for young people.

University academic leader

Sean is the Associate Dean (Education and Employability) for the School of Life Sciences at Lambeth University. He has recently secured funding to run some life sciences-focused skills bootcamps for local residents to help them access entry-level roles in the companies starting to occupy the SC1 hubs. He has also setup a number of microcredential courses to help upskill these companies' existing staff, and has been approached as a career life scientist to support a couple of clinical trials a company wishes to run in Lambeth.

Sean would like a multipurpose space with small interview rooms closely located to the SC1 hubs that can be used for teaching, workshops, placement interviews and clinical trial sessions with participants. In addition, he would like a location from which he can run part of the School's outreach programme, which includes the opportunity to design and make an idea.

Case study initiatives and activities

This section provides a series of case studies of how local communities have been engaged in science, technology, engineering and mathematics in the UK and in other countries. Whilst many are not specific to the life sciences, most could be adapted to focus to have that specialism if required.

Lambeth Council has seen particular success in driving inclusive growth in the digital and creative sectors through the ELEVATE programme.

ELEVATE reflects Lambeth's mission to open up the creative and cultural sector to every young person in the borough. It was established in response to the ongoing shifts in Lambeth's economy towards an increasing focus on the digital and creative industries both as emerging sectors and the greater need for digital and creative skills in traditional employment roles within the borough.

Using three strands, the underlying aim is to increase the diversity of talent in the creative and digital industries within the Borough and take advantage of the higher gross value added that this sector has been shown to offer.

ELEVATE Neighbourhoods

- Neighbourhoods gives Lambeth's young people the chance to collaborate on new creative, out of school projects. Local arts organisations collaborate with community partners across the borough.
- ELEVATE Neighbourhoods is led by the Elevators, ELEVATE's youth advisory group. In 2020, and following an open call and online briefing hosted by the Elevators, seven projects were each awarded £7,000 to deliver activities such as:
 - Creating a film and online archive on Black British identity
 - Workshops in creative self-expression leading to an exhibition
 - A development programme connecting local talent to career opportunities
 - Using specially designed kits to create games, completing them through a 48 hour online game jam.

ELEVATE Education

- ELEVATE Education ignites Lambeth schools with an unmissable arts education offer for students. Cultural organisations and teachers work together to achieve this through Lambeth's Cultural Education Partnership (LCEP). ELEVATE shares creative activities for young people to get involved with.
- For example, young residents could join the Art Assassins and develop new skills in event planning and management, communication and marketing, curating & exhibition making, public speaking and teamwork whilst learning about careers in the creative industry at the South London Gallery.
- Or they could take part in the Kinetika Bloco holiday workshop gives young people the opportunity to learn drums, woodwind, brass and steel pan and create a live music performance together with 60 other young people.

ELEVATE Careers

- The careers strand offers fresh opportunities for Lambeth based young people seeking a career in the creative industries, with Lambeth's leading art institutions.
- For example, in partnership with Get Set, ELEVATE was able to offer one-to-one support and advice from a specialist advisor to creative 16-24 year olds not in education, training or employment interested in starting a creative career. The support also included interview techniques, confidence building workshops, and a range of functional support covering budgeting and housing.
- Work experience, taster sessions, internship, development programmes and apprenticeship opportunities are also offered through ELEVATE in conjunction with local creative institutions.

Bay Area STEM Ecosystem Summer Series

- The Bay Area STEM Ecosystem is a partnership of private and public organisations which aims to increase equity and access to STEM learning opportunities in underserved communities. One of its key priorities is to make it easier for families to engage with and access informal STEM opportunities.
- As one of their first actionable goals, the Ecosystem chose to complement other STEM education efforts in the region and support a free summer STEM series to meet the need for high-quality, engaging STEM programmes in South San Francisco. The series was advertised for families with children ages 3-13 years.
- Thirteen organisations (including corporate sector) designed and hosted two-hour sessions for young people and families on consecutive Saturday mornings. All the sessions were held in a centrally-located, easily accessible location in the community.

School Science Club

- Challenges faced by schools include how to make science interesting, relevant and engaging for their pupils. A consortium of eight schools was approached by the researchers at Cardiff University and a Science Club was established for year 6 pupils that complemented the schools' science curriculum.
- The activities were centred on two, three-hour school visits covering The Body and Bugs, and The Skin, Brain and Drugs, facilitated by a university lead. A final 'showcase' university visit by all pupils taking part encompassing a tour of the facilities, several interactive activities, and talks by current PhD students regarding their area of research and how they became a scientist.
- Outcomes were overwhelmingly positive and helped improve view of contemporary scientists and what their jobs entail.

I'm a Scientist, Get Me Out of Here

- *I'm a Scientist, Get Me Out of Here* is a student-led, online science enrichment activity where students interact with scientists. One of its main aims is to encourage students to engage and identify with science, supporting the development of aspirations in science and coming to see it as 'for me'.
- *I'm a Scientist* provides support for similar outcomes to knowing people in science-related jobs — understanding what it's like to work in those jobs and, even more importantly, coming to see scientists as 'normal' people. Research shows that this understanding — which is abundant in young people who have friends or family working in science — facilitates a sense that science is 'for me' and makes it more likely that an individual can envisage being a scientist as a 'possible self'.

Girls' STEM club

- Researchers at UCL's Institute for Education observed a weekly afterschool STEM club run by a social enterprise in London working with young women (aged 11-14) from working class and minority ethnic groups under the Youth Equity and STEM project.
- In addition to weekly club sessions, the girls took part in two off-site whole day sessions—a coding development day trip hosted at a global consultancy firm and a Saturday coding day held at a global bank. The club sessions followed a common format each time, beginning with a focus on a female STEM professional, such as celebrated mathematicians, computer scientists, and engineers. This was followed by a choice of two activities—either a making (creative) activity or an exploring activity, in which the young women would research a topic further on the internet and then present their findings back to the group.

British Science Week Community Grants

- LPF Kiddies Club is a non-profit out of school club based in South East London which works with African and Caribbean children aged 5-14 and their families.
- The Club received British Science Association Community Grants in 2016 and 2018. In 2016, the Club ran a science fair with activities including recycling materials into toys, mini-blogging, creating paper planes and comparing their distance and speed of travel, and calculating the sugar and salt content of their packed lunches.
- The aim of the fair was to show the young people that science is for them, and they could possibly have a career in STEM in the future. In 2018, the Grant funded activities focused on identity, with the aim to connect the children with scientists who look and sound like them and have a similar background. This was to help children see that they can pursue careers in STEM, regardless of race, gender and class.

Reclaiming our Science Centre

- Educators at Impression 5 Science Center in Lansing, Michigan partnered with young people and with University of Michigan researchers to re-think and re-design the Center. Well-designed science learning spaces can create important opportunities for positive, meaningful engagement. However, they can be unwelcoming through how they are organized. Images, text, and the design and flow of exhibits all send messages about who belongs or is welcomed in the space.
- The project explored how spaces can contain a collision of histories, lives, and cultures, and how white male imaginations tend to dominate in science centers. The young people's justice-oriented response, which was grounded in their lived experiences, led to renaming and redesigning spaces to become inclusive of groups that had been excluded, invisible, and/or unheard in STEM.

Parent Power

- The Parent Power model, originally created by King's College London and Citizens UK, brings together local parents and carers and facilitates one-to-one and group meetings led by a local Community Organiser. Through advice and guidance on accessing higher education, and developing skills in community organising, Parent Power empowers parents and carers to make change in their children's future.
- The parents themselves decide what activities will benefit their communities and children; Parent Power chapters across the UK have arranged tailored university trips, received training on student finances and secured bursary places at summer schools.
- Since its formation in 2017, the South London and Oldham chapters have collectively engaged over 350 parents/carers.

STRIDE

- Using an £8 million grant from the Corporation of London in 2019, the STRIDE project has been delivering a range of projects that have helped to nurture innovation, empower talent and encourage enterprise through affordable workspace, talent development, business support and knowledge exchange.
- An ongoing focus has been on ensuring that at least half of the programme's beneficiaries were women or from a minority ethnic background. Indeed, over 80 per cent of beneficiaries have come from these backgrounds, demonstrating its success.
- In particular, STRIDE has been successful in helping beneficiaries overcome barriers to access such as ensuring the timing of events is convenient to care-givers and ensuring that funding was available to alleviate the endemic travel poverty within South London.

Recommendations

This section brings together the key recommendations arising from this report into a short action plan. Each recommendation has been aligned to one or more of the eight dimensions of science capital to demonstrate the contribution that the innovation centre can make.

Recommendations

Recommendation	Dimension of Science Capital influenced	Priority
<p>Secure expert community research consultancy support to identify how the innovation centre could reflect the local community. This could include:</p> <ul style="list-style-type: none"> • Improving representation of under-represented groups in computer generated images of new buildings and spaces. • Active engagement with local residents in the design process for the centre. • Reflect the local community through artwork, role model stories and room naming. • Involve architects and/or designers from communities of colour. • Include subtle and inconspicuous experiences of people of colour in all their diversity. 	All	High
<p>Include a technician-supported MakerHealth space within the design plans for the innovation centre, which is usable by both tenants and local entrepreneurs, schools or community groups.</p>	<ul style="list-style-type: none"> • Participation in out of school science contexts • Family science skills, knowledge and qualifications 	High
<p>Establish a pilot community engagement programme for both young people (aged 10 to 16) and families to be run from and within the innovation centre to include:</p> <ul style="list-style-type: none"> • After-school science clubs and school holiday-based science activity camps. • An online enrichment programme similar to <i>I'm a scientist, get me out of here!</i> • A summer series of family-orientated science activities led by tenants or SC1 founders. • Pop-up science demonstrations for residents and schools in the centre's outdoor area • Dedicated programme of activities and grant funding opportunities during British Science Week. • Co-created and co-led community research projects in health and the life sciences. • School visits for events in the centre led by the tenants or partner outreach teams. • Regular community wellbeing initiatives run by local groups. • Talks by tenants or academics on popular science topics to community groups. 	<ul style="list-style-type: none"> • Science literacy • Attitudes, values and dispositions • Knowledge about transferability • Participation in out of school science contexts • Family science skills, knowledge and qualifications • Knowing people in science related roles 	High

Recommendations

Recommendation	Dimension of Science Capital influenced	Priority
Ensure the proposed community space is large enough for at least one school class plus its staff to be seated in 'cabaret' format, c.33 people plus session leaders.	All	High
Reconsider the location of the community space to be more at the front of the centre to both ensure natural light and visibility to passers-by.	All	Medium
Develop the open space area to the front of the innovation centre in conjunction with local community groups to create a wellbeing garden and a space for outdoor demonstrations, exhibitions and activities.	<ul style="list-style-type: none"> • Attitudes, values and dispositions • Family science skills, knowledge and qualifications 	Medium
Similar to the Camden STEAM Pledge, ensure that each tenant in the innovation centre commits to one or more social responsibility initiatives that are designed to increase both community engagement and access to the employment and skills opportunities within the life sciences for residents.	<ul style="list-style-type: none"> • Attitudes, values and dispositions • Knowledge about transferability • Knowing people in science-related roles 	High
Plan and schedule activities within the centre in ways that create alignment, and reduce overlap, between existing life sciences' focused community engagement initiatives being undertaken through the centre and by the local universities and NHS trusts.	All	Medium
Consider how to mitigate the risk of tenants having priority access over the innovation centre's facilities, which could lead to reduced utility of the centre for community engagement activities.	All	Medium

Pragmatix Advisory Limited

enquiries@pragmatixadvisory.com
020 3880 8640
pragmatixadvisory.com

Registered in England number 12403422
Registered address: 146 New London Road, Chelmsford, Essex CM2 0AW
VAT Registration Number 340 8912 04

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