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Policy Brief

Opening HEI life-science infrastructure to the regional economy



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| EXECUTIVE SUMMARY

Regions do not have an infrastructure shortage. They have an access-management gap. Closing it is a governance task, not a construction project, and it can start within the current budget cycle.

Universities and public research organisations across Europe host wet labs, imaging platforms, biofoundries and pilot production lines that were funded to build regional research and innovation capacity. Much of this infrastructure sits idle for large parts of the working week, while biotech startups and SMEs in the same region are unable to access equivalent equipment at any price. This is not a story about missing infrastructure. It is a story about missing rules.

The barriers that keep publicly funded life-science infrastructure closed to the regional economy are administrative rather than physical: unclear cost-recovery rules, cautious interpretation of liability and biosafety obligations, fear of breaching State aid law, and the absence of published access protocols and pricing. Because these barriers are rarely visible in strategy documents, regions and national governments tend to respond by funding new infrastructure rather than by unlocking the capacity they already own.

This brief sets out five practical, low-cost policy actions that regional authorities, higher education institution (HEI) leaders and national ministries can take to convert existing life-science assets into shared regional infrastructure: publishing open-access schemes with transparent pricing; issuing innovation vouchers redeemable against HEI facility time; adopting State-aid-compliant templates for shared-use arrangements; embedding technician and platform-operator careers in HEI staffing structures; and making access plans a condition of future capital investment.

None of these recommendations requires new laboratories, new equipment, or major new spending. Each is implementable within existing legal frameworks and existing budget cycles, and each can be piloted within a single regional innovation programme before being scaled through the next Smart Specialisation Strategy (S3) and European Regional Development Fund (ERDF) programming period.

| POLICY CONTEXT

The competitiveness of Europe's life-sciences and bioeconomy sectors depends increasingly on early-stage access to specialised, capital-intensive equipment: cell and molecular biology wet labs, advanced imaging suites, biofoundries for synthetic biology and strain engineering, and pilot-scale production lines for scale-up before industrial manufacturing. Few startups or SMEs can afford to build this capacity themselves, and few would wish to, since utilisation would be far below what is needed to justify the investment. Historically, this is precisely the gap that public research infrastructure in higher education institutions (HEIs) was built to fill.

European and national research and innovation policy has, over the past decade, placed growing emphasis on the "third mission" of universities, understood as knowledge transfer, entrepreneurship support and regional engagement, alongside teaching and research. Frameworks such as HEInnovate, developed jointly by the European Commission and the OECD, encourage HEIs to assess and strengthen their entrepreneurial and innovation capacity, including the openness of their infrastructure and services to external partners. Regional Smart Specialisation Strategies (S3), which steer the allocation of European Regional Development Fund (ERDF) resources for the 2021 to 2027 programming period, likewise identify shared research infrastructure as a lever for building regional innovation ecosystems around priority technology domains, frequently including health, biotechnology and the bioeconomy.

At the same time, cohesion policy continues to finance the construction and upgrading of research infrastructure in HEIs at a significant scale, on the assumption that new capital investment is the primary constraint on regional innovation capacity. Parallel policy strands, including open science, open innovation and the European Research Area (ERA) agenda, promote wider access to research infrastructure as a matter of principle, but generally address access between researchers and research organisations rather than access between HEIs and commercial regional actors such as startups and SMEs.

The result is a policy context that funds the creation of life-science infrastructure generously, but says comparatively little about how that infrastructure should be operated once built, and by whom it may be used. Access rules, cost-recovery models, liability arrangements and State aid compliance are typically left to individual HEIs to resolve, with limited central guidance, limited legal capacity at institutional level, and no obligation to publish the outcome. This brief addresses that gap directly.

Relevant policy frameworks

- European Charter for Access to Research Infrastructures.
- European Research Area (ERA) Policy Agenda.
- EU Strategy on Research and Technology Infrastructures.
- European Strategy Forum on Research Infrastructures (ESFRI) RoadMap.
- HEInnovate Framework (European Commission–OECD).
- EU Cohesion Policy 2021–2027.
- European Regional Development Fund (ERDF) Regulation.
- European Innovation Council (EIC) and the European Innovation Ecosystems programme.

| PROBLEM STATEMENT

Equipment exists; rules to use it responsibly, fairly and legally do not, and until that changes, more equipment will not solve the problem.

The policy challenge can be stated simply: publicly funded life-science infrastructure in HEIs is chronically underused, while regional biotech startups and SMEs that need exactly this type of infrastructure cannot access it, at any price. The unmet demand and the unused capacity coexist in the same region, often on the same street, without connecting.

Why this happens, five administrative blockers

Consultations carried out for this brief, together with the wider evidence base on infrastructure sharing between HEIs and industry, point to five recurring administrative blockers. None of them concerns the physical equipment itself.

1. Cost-recovery rules are absent or unworkable. Many HEIs have no published methodology for pricing external access to equipment and technician time. Where a methodology exists, it is often built for full economic costing suited to large research grants, not for a two-day trial run by a five-person startup, so the quoted price is disproportionate to what a small user can pay or plan for.
2. Liability and biosafety regimes default to exclusion. Institutional legal and safety offices, lacking a template for external users, tend to treat any request for third-party access as a novel risk requiring bespoke legal review. Faced with limited legal capacity and no precedent, the default decision is to decline or indefinitely delay, rather than to approve.
3. State-aid caution produces blanket avoidance. Because charging below-market rates for use of a public asset can constitute State aid to the user, HEI finance and legal teams frequently respond to this complexity by avoiding external access altogether, rather than by applying the well-established exemptions and thresholds (such as the General Block Exemption Regulation) that were designed precisely to permit this kind of activity.
4. Access protocols and pricing are not published. Even where individual platform managers are willing to host external users informally, the absence of a published access route means that startups and SMEs outside existing personal networks do not know that access is possible, whom to approach, or what it might cost. Access becomes a matter of who you know rather than a standard institutional service.
5. There is no career structure for the people who make access possible. Platform and equipment access depends on skilled technicians and platform operators, but these roles are frequently funded through short-term project budgets rather than core institutional staffing. High turnover and loss of institutional knowledge follow, undermining the continuity that external users need to trust a facility as a long-term partner.

A capital-investment bias reinforces the problem

Regional and national authorities compound these blockers through their own investment behaviour. Because access barriers are not visible in capital investment business cases, and because building something new is politically easier to announce than fixing how an existing asset is managed, regions tend to respond to unmet SME demand for equipment by funding additional infrastructure, rather than by first asking whether existing capacity could be unlocked. The consequence is a growing stock of specialised infrastructure with a persistently low and undocumented utilisation rate, and a parallel, unmet demand from the regional economy that additional construction alone will not resolve.

| PROJECT FINDINGS

About the DeepBioTech project
DeepBioTech is an Erasmus+ Cooperation Partnership project, launched in September 2024, bringing together universities and innovation support organisations from several European countries. Its goal is to transform life science higher education by integrating deep technology into research commercialisation and entrepreneurship. Core activities include a life sciences entrepreneurship course with micro-credentials, a transformation toolkit for university lecturers and administrators, a digital platform for deep tech immersion and investor matchmaking, and a series of hackathons and open days connecting students, researchers and industry. The findings in this section draw on consultations, facility mapping and stakeholder engagement carried out through the project.

This brief draws on structured engagement with HEI platform managers, technology transfer offices, regional development and innovation agencies, and biotech startups and SMEs across several partner regions, combined with a mapping of existing life-science infrastructure and current access practice. The engagement was designed to test whether the blockers set out above are experienced consistently across institutions and regions, and to identify practices that already work.

What HEI platform managers report

- Utilisation of specialised equipment (imaging suites, biofoundry lines, pilot bioprocessing equipment) is frequently concentrated in a small number of weeks per year tied to grant-funded research projects, with substantial idle capacity in between.
- Where informal external access does take place, it is usually negotiated case-by-case between a platform manager and a personal contact in industry, rather than through any published institutional route, and is rarely recorded or reported upward.
- Platform managers consistently identify legal and financial uncertainty, not lack of interest, not lack of external demand, and not equipment scarcity, as the main reason they do not offer wider access.

What startups and SMEs report

- Early-stage biotech companies report needing short, flexible blocks of specialised equipment time (days rather than months) at a stage when building or leasing their own facility is neither affordable nor justified by their level of activity.
- Most SMEs consulted were unaware that access to HEI equipment was formally possible at all, and assumed, correctly in most cases, that the practical route would depend on personal contacts rather than a standard process.
- Price uncertainty is as significant a barrier as price level: SMEs are frequently unable to obtain a quotation in advance, which prevents them from budgeting for access or including it in funding applications.

What regional and national authorities report

- Regional agencies confirm that capital investment programmes for research infrastructure rarely include any requirement, incentive or even question relating to third-party access once the infrastructure is operational.
- Innovation voucher schemes exist in several regions but are seldom designed with HEI facility access explicitly in mind, and HEIs are correspondingly rarely listed as eligible voucher-redemption partners.
- Legal and State aid expertise capable of producing a standard shared-use template is concentrated at national or European level; individual HEIs and regional agencies typically lack the specialist capacity to produce compliant templates on their own, and instead avoid the issue.

Where promising practice already exists

Across the regions and institutions engaged, isolated examples of good practice were identified: a published price list for imaging time at one facility; a biofoundry that had negotiated a standard material transfer and liability template with its legal office; a regional voucher scheme that had, after negotiation, added a single HEI as an eligible supplier. In every case, the practice had been developed locally, at significant effort, by an individual manager or office, and had not been documented, replicated or scaled to other facilities or regions. The core finding of this brief follows directly from this observation: the solutions required are already known and already exist in fragments. What is missing is a mechanism to standardise, publish and scale them systematically, rather than to reinvent them facility by facility.

| POLICY RECOMMENDATIONS

The following five recommendations respond directly to the blockers identified above. They are designed to be implementable using existing legal instruments and existing funding cycles, and are presented in the order in which a region or institution could reasonably sequence them, though several can proceed in parallel.

RECOMMENDATION 1

Publish open-access schemes with transparent rules and pricing

Every HEI hosting significant life-science infrastructure should publish, for each major facility, a simple access route: who can apply, what the process involves, indicative turnaround time, and a public price list covering standard use cases (for example, a half-day imaging session or a defined biofoundry workflow). Pricing does not need to be complex: a small number of standard tiers, reviewed annually, is preferable to a bespoke full-cost calculation for every enquiry, and removes the price uncertainty that startups and SMEs consistently identify as a barrier.

Implementation level: Institutional (HEI). Lead actor(s): HEI leadership, in coordination with facility managers, finance and legal offices. This is the recommendation with the shortest implementation path, since it requires no new legislation and no new funding, only an institutional decision to document and publish what, in practice, several facilities already do informally.

RECOMMENDATION 2

Extend innovation voucher schemes to cover HEI facility time

Regional development and innovation agencies operating innovation voucher schemes should explicitly list eligible HEI facilities as redemption partners, alongside consultancy and testing services. Vouchers should be sized to cover realistic short-term access (for example, several days of platform time plus technician support), and the application process should be lightweight enough for an early-stage SME to complete without external advisory support.

Implementation level: Regional, co-financed where appropriate through ERDF. Lead actor(s): Regional development and innovation agencies, in consultation with HEIs to confirm facility eligibility and pricing. This recommendation can build directly on Recommendation 1, since a facility cannot be a credible voucher-redemption partner until it has a published access route and price list.

RECOMMENDATION 3

Adopt State-aid-compliant templates for shared-use arrangements

National ministries responsible for research and innovation, working with State aid legal expertise, should produce and disseminate a small set of standard, pre-cleared templates covering the most common shared-use scenarios: short-term equipment access, material transfer, and liability allocation for external users. These templates should draw on established exemptions, in particular the General Block Exemption Regulation provisions for research and development aid, so that individual HEI legal offices are applying a pre-approved instrument rather than constructing a bespoke legal position from first principles for every request.

Implementation level: National, drawing on European legal frameworks, disseminated regionally. Lead actor(s): National ministries for research and innovation, in cooperation with national State aid authorities and, where useful, the European Commission's State aid guidance services. This recommendation directly addresses the single blocker most frequently cited by HEI legal and finance offices as a reason for avoiding external access altogether.

RECOMMENDATION 4

Embed technician and platform-operator careers in HEI staffing structures

HEIs, supported by national higher education staffing and funding policy, should create defined, core-funded career tracks for technicians and platform operators, rather than relying on short-term project funding for these roles. A credible external access offer depends on continuity of expertise: an external user needs confidence that the same skilled operator will be available across a multi-month project, not only for the duration of a single grant.

Implementation level: Institutional (HEI) for staffing structures, national for the funding and career-framework policy that makes institutional action affordable and sustainable. Lead actor(s): HEI human resources and leadership, national ministries responsible for higher education staffing and research careers. This recommendation has a longer implementation horizon than Recommendations 1 to 3, since it typically requires budgetary and, in some cases, regulatory change at national level.

RECOMMENDATION 5

Require access plans as a condition of new capital investment

Regional and European authorities funding new or upgraded research infrastructure, through ERDF, national co-financing or Smart Specialisation Strategy investment priorities, should require applicant HEIs to submit a third-party access plan as part of the investment business case, covering intended access route, indicative pricing approach, and expected regional user base. This does not require every future facility to be fully open to all comers; it requires the question of regional access to be asked, answered and monitored before public capital is committed, rather than left unaddressed after the facility opens.

Implementation level: Regional and European, applied through ERDF and Smart Specialisation Strategy investment conditions, enforced institutionally by applicant HEIs. Lead actor(s): Managing authorities for ERDF and S3 programmes, regional development and innovation agencies, and HEI leadership as applicants. This recommendation is the most direct response to the capital-investment bias identified in the Problem statement, and ensures that Recommendations 1 to 4 become the default for future infrastructure rather than a retrofit exercise.

Summary Table

Recommendation	What it means in practice	Implementation level	Lead actor(s)	Indicative horizon
1. Open-access schemes	Published access route and transparent, tiered pricing per facility	Institutional	HEI leadership, facility managers	0 to 6 months
2. Innovation vouchers	HEI facilities added as eligible voucher-redemption partners	Regional (ERDF co-financed)	Regional development / innovation agencies	6 to 12 months
3. State-aid templates	Pre-cleared templates for access, transfer and liability	National / European	National ministries, State aid authorities	6 to 18 months
4. Technician careers	Core-funded, continuous platform-operator posts	Institutional, enabled nationally	HEI HR and leadership, national ministries	12 to 24 months
5. Access-plan conditionality	Access plan required in capital investment business cases	Regional / European	ERDF and S3 managing authorities	Next programming cycle

| IMPLEMENDATION CONSIDERATIONS

Sequencing
Recommendations 1 and 2 can be piloted quickly and at low cost, since they largely formalise practices that already exist informally in parts of the system; they are the natural starting point for any region or institution acting on this brief. Recommendation 3 requires legal drafting capacity that is more efficiently produced once, at national level, and then reused across HEIs and regions, rather than developed independently by each institution. Recommendations 4 and 5 have longer horizons because they involve staffing budgets and investment programme design respectively, but both should be initiated in parallel with the earlier steps, since waiting for Recommendations 1 to 3 to conclude before starting them would unnecessarily delay their effect.

Cost-recovery design
Pricing models should distinguish clearly between marginal-cost pricing, appropriate for occasional short-term SME access where the objective is regional economic benefit rather than institutional revenue generation, and full-cost pricing, appropriate for sustained commercial use at scale. Applying full-cost pricing indiscriminately to every external user is a common cause of access schemes failing in practice, since it prices out exactly the early-stage users the scheme is intended to serve.

Managing State aid and legal risk
Recommendation 3 should be treated as a shared public good: once a national ministry or umbrella body produces a compliant template, individual HEIs should not need to repeat the underlying legal analysis. Regional agencies can support adoption by requiring, as a condition of related funding (for example, voucher schemes under Recommendation 2), that participating HEIs use the national template rather than a bespoke local alternative, which also reduces legal risk for the HEI itself.

Institutional incentives
HEI finance offices are more likely to support open-access schemes where facility income, even at modest, marginal-cost levels, can be retained by the platform rather than returned to general institutional funds, since this creates a direct incentive for platform managers to sustain and expand external access. Regional and national funders can support this by explicitly permitting facility-level income retention in the terms of any related grant or investment.

Monitoring and evaluation
A small number of indicators, tracked consistently across facilities and reported to the relevant regional or national authority, would allow progress to be assessed without imposing a significant reporting burden: facility utilisation rate by external (non-HEI) users; number of distinct SME and startup users per year; average time from enquiry to access; and, where relevant, voucher uptake by HEI facilities. These indicators should be built into the access plans required under Recommendation 5, so that monitoring is established from the point of investment rather than added retroactively.

Risk of adverse selection
There is a risk that open-access schemes are used disproportionately by better-resourced, better-connected SMEs that already have relationships with HEI staff, replicating rather than solving the current pattern of informal, network-based access. Regional agencies can mitigate this by pairing Recommendation 2 (vouchers) with targeted outreach to startups and SMEs outside existing HEI networks, rather than relying on publication of the access route (Recommendation 1) alone to reach new users.

| CONCLUSION

The infrastructure that regional biotech ecosystems need to grow already exists in large part within Europe's higher education institutions. What is missing is not equipment, but the administrative architecture that would allow regional startups and SMEs to use it: published rules, workable pricing, legal certainty, continuity of skilled staff, and investment conditions that ask the access question before, not after, public capital is committed.

The five recommendations in this brief are deliberately modest in cost and deliberately concrete in design. They can be initiated within current budget cycles, piloted within a single region or institution, and scaled through the next generation of Smart Specialisation Strategies and ERDF programming without waiting for a new funding instrument to be created. The central choice facing regional and national decision-makers is not whether more life-science infrastructure is needed, but whether the infrastructure already funded will be allowed to do the job it was built for.

| REFERENCES

- European Commission (2021). Regulation (EU) 2021/1058 of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund.
- European Commission (2023). Communication from the Commission, Guidelines on State aid to promote risk finance investments; and Commission Regulation (EU) No 651/2014 (General Block Exemption Regulation), as amended, in particular the provisions on aid for research and development and innovation.
- European Commission (2022). Framework for State aid for research and development and innovation (2022/C 414/01).
- European Commission and OECD. HEInnovate, a guiding framework for entrepreneurial and innovative higher education institutions. Available at: heinnovate.eu.
- European Commission. Smart Specialisation Platform (S3). Available at: s3platform.jrc.ec.europa.eu.
- European Commission (2020). A New ERA for Research and Innovation, COM(2020) 628 final.
- OECD (2019). Higher Education and Regional Development. OECD Publishing.
- European Commission (2021). Communication on the European Research Area Policy Agenda 2022 to 2024.
- Council of the European Union. Council conclusions on deepening the European Research Area: Providing researchers, especially early-career researchers, with attractive and sustainable careers and working conditions.
- DeepBioTech (2024 to 2027). Erasmus+ Cooperation Partnership project. Regional partner consultations, facility mapping exercises and stakeholder engagement conducted as part of the project underpinning this brief.

Project Partners

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