Vall d'Hebron Research Institute (VHIR) has established itself as a leading centre for biomedical research and as a benchmark in innovation in the field of health sciences. With a steadfast commitment to improving lives through innovation and knowledge transfer, VHIR has created an innovation ecosystem that blends scientific excellence with a strong focus on delivering meaningful impact for patients and society.

As a result of this strategic commitment, VHIR has secured multiple licensing agreements with industry and has actively contributed to the creation and consolidation of 23 companies specialising in innovative solutions across key areas such as new drug design, early and accurate disease diagnosis, the development of medical devices to enhance clinical procedures and to improve patients' quality of life, and advancements in digital health solutions. These initiatives have driven scientific progress, boosted economic growth in the healthcare sector, strengthened the entrepreneurial ecosystem, and improved the ability to address challenges within the healthcare system.

In addition to these achievements, VHIR leads a substantial number of innovative projects, a figure expected to grow in the coming years thanks to ongoing efforts to foster a culture of innovation. Key initiatives include *Rising Innovators*, VHIR's internal Innovation and Entrepreneurship training programme, and close collaboration with international consortia, private sector partners, and public organisations. Developed within a hospital campus, these initiatives generate intangible assets and technological advancements that directly address the real needs of patients and healthcare professionals.

While VHIR has established itself as a leader in innovation, this success presents a significant challenge: managing an increasingly dynamic and evolving ecosystem while ensuring that all initiatives receive the support needed to maximise their impact.

Success in transferring an innovation asset goes beyond scientific merit alone. While scientific excellence forms an essential foundation, maximising successful technology transfer requires that several critical factors be addressed. Key factors include: defining a robust asset protection strategy in order to ensure legal security and competitiveness, conducting business analysis to identify potential markets and create a viable development plan, addressing specific regulatory barriers, evaluating the project's funding needs, and assembling an exceptional team to lead the development and transfer process.

However, researchers responsible for the scientific and technical development of these innovations often lack the expertise and tools necessary to address these other areas. This is precisely where VHIR plays an essential role by providing specialised resources that help address these critical aspects. This unit not only provides the necessary support to help projects address these critical aspects but also acts as a bridge between the scientific sphere and the business and regulatory ecosystem, assisting researchers in transforming their discoveries into applicable and scalable solutions.

In addition to the importance of this support, the high volume of projects makes it difficult to provide the personalised, proactive, and comprehensive attention that each initiative

requires. This imbalance creates a strain on resources, which can prevent some projects from passing through key development stages. Without a clear and adaptive approach, regulatory barriers, funding difficulties and the lack of market strategies can slow progress or even halt the transfer of high-impact potential assets.

Additionally, although the quantity and quality of initiatives developed at VHIR are undeniable, the lack of a structured process to prioritise and accelerate the maturation of projects with the greatest potential can limit the ecosystem's overall impact. This can translate into a significant loss of opportunities for healthcare systems and society.

This situation highlights the need to implement a more agile, structured, and efficient approach that allows VHIR not only to manage the high volume of projects but also to provide each researcher and initiative with the necessary support to overcome critical barriers, mature successfully, and maximise their impact.

To tackle the challenges associated with managing a high-capacity innovation ecosystem, VHIR has designed a *lean* process focused on maturing and comprehensively evaluating key dimensions essential for developing innovative solutions. This approach allows for the analysis and strengthening of critical aspects such as asset protection, business analysis, identification of regulatory barriers, evaluation of market potential, funding requirements and the formation of an exceptional team.

The process is structured throughout the project lifecycle through the definition of three control points, which allow for continuous strategic evaluation of the asset during its development. These control points are essential for assessing the transfer potential of each project and optimising the use of available resources, applying the *fail-fast* principle. Through this structure, projects can be assessed at different stages of development, identifying any early challenges to enable informed decision-making regarding their viability and future.

The first control point is the Feasibility Phase, where research projects are assessed based on their maturity and potential to determine whether they are suitable candidates for inclusion in VHIR's innovation portfolio. During this stage, fundamental aspects are analysed, including asset protection, preliminary business validation, identification of potential regulatory barriers, and the project's ability to generate value. Only projects demonstrating a high transfer potential progress to the next phase of the process.

Once projects have been incorporated into VHIR's innovation portfolio, the next step is the Development Phase. At this stage, the projects have reached a sufficient maturity level in key areas such as technical, economic, regulatory, and market viability. This allows them to start defining the most suitable transfer strategy for each asset. During the Development Phase, thorough assessments are carried out to determine whether the project is ready to advance towards its market transfer or if adjustments to its development are necessary.

Finally, the process concludes with the Launch Phase, where the transfer strategy has already been defined and validated. In this phase, the asset is ready for implementation

and market launch. Projects that reach this stage have overcome critical barriers, have a clear commercialisation strategy, and have demonstrated high-impact potential. VHIR, through its innovation unit in collaboration with the business development unit, provides the necessary support to ensure that the transfer is carried out effectively, maximising the asset's value and impact.

Based on well-defined control points, this innovation process ensures that each project progresses efficiently and smoothly, prioritising those with the greatest transfer potential. By adopting the *fail-fast* principle, any difficulties or limitations can be identified at an early stage, optimising resources and directing them towards high-impact projects with strong success potential. This approach facilitates proactive management and the development of tools for monitoring the innovation portfolio.

A key element of the process is the use of tools that enable us to objectively measure the level of maturity across each project's different dimensions, taking into account its specific type (drug development, diagnostics, medical devices, or digital health solutions). In this regard, VHIR has developed its assessment model inspired by the KTH model[1]. This model sets specific and measurable objectives for each key dimension of the project, such as asset protection, business analysis, and regulatory aspects. A project can advance to the next stage of the process only when the established maturity levels have been met in each dimension. This approach ensures that each project progresses systematically, achieving the necessary milestones before moving to the next phase, maximising the likelihood of a successful asset transfer.

The process is strengthened by a network of mentors who play a crucial role in the development of innovation projects. This network consists of external advisers with expertise in key areas such as market dynamics, regulation, financing, asset protection, and other critical aspects essential for the successful transfer of technology. Under the supervision and guidance of the innovation manager, these mentors offer strategic and practical advice, helping to identify and address key aspects that could be decisive for the project's success. Furthermore, this network promotes the integration of Responsible Research and Innovation (RRI) principles, ensuring that projects are sustainable, ethical, socially responsible and aligned with society's needs and values. In this way, it not only expands the range of available resources but also provides valuable external insight that enhances the decision-making process, allowing projects to develop with a comprehensive approach tailored to the demands of their environment.

In conclusion, VHIR has established a structured, agile, and efficient process for managing a continuously growing innovation ecosystem. This approach, based on collaboration, entrepreneurship, and impact, not only ensures that projects progress in a structured and strategic manner but also prioritises those with the greatest impact potential. By means of the implementation of objective assessment tools, the strengthening its mentor network, and the design of clear control points throughout the

[1] https://kthinnovationreadinesslevel.com/

project lifecycle, VHIR aims to position itself as a reference model in innovation management, knowledge transfer, and the creation of new opportunities. This effort not only maximises the likelihood of success for each asset but also ensures that the solutions developed have a meaningful impact on patients, healthcare systems, and society as a whole.

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