

Innovation partnerships shaping the future of healthcare

by Johan Permert, Karolinska University Hospital

Parallel to Stockholm's new life science cluster emerging around New Karolinska Solna University Hospital, a new model for collaboration between healthcare and industry is being developed: innovation partnerships. These partnerships go far beyond developing individual products. They are about taking a joint approach to the most important issues: how should future healthcare be designed – from the bottom up?

Karolinska University Hospital's intensive work on innovation is performed with a clear goal: more effective care at a lower cost, and more rapid development of tomorrow's healthcare solutions. Patients should benefit as soon as possible from the progress made. It is quite simply a question of creating maximum patient value from Swedish taxpayers' money.

Medical professionals are key resources in this development work, but different perspectives provide more innovative solutions, which are necessary if we are to cope with the major challenges faced by healthcare – not only in Sweden but internationally. One important task for Karolinska University Hospital is therefore to establish national and international partnerships between industry, academia and healthcare.

Thanks to the major investment in life sciences in the Stockholm region, excellent universities such as Karolinska Institutet and Royal Institute of Technology, and the construction of New Karolinska Solna, we have been able to take our strategic partnerships with industry to the next level. We are now forging innovation partnerships with several of the companies that supply equipment to the new university hospital. The partnerships may therefore be linked to the procurement of new equipment, but not exclusively. We also form partnerships outside the procurement process.

Developing more effectively – and rapidly – together

Innovation partnership entails a long-term, more in-depth relationship than a traditional partnership agreement between supplier and customer. It is about collaboratively coming up with ideas in order to address the major challenges. Together, we will change the organisation, processes and working methods of healthcare. We will identify new areas of innovation and modernise the way in which the healthcare sector acquires, and applies knowledge. We will also create a bigger – and better – playing field for joint innovation in the future.

In this kind of partnership, healthcare and industry can create synergies – adding value to a degree that cannot be achieved separately. Not only will we generate greater

patient value, but we will also discover and create new forms of value. The partnership will allow us to increase the yield in our agenda for change and development. Both healthcare and industry will develop more effectively – and rapidly.

It is thus a question of mutual investment. Both parties bring knowledge and resources to the table and both expect an extraordinary return on investment – a result that cannot be predicted in the initial phase.

But there is one thing that we can already establish at this early stage: together with us, Karolinska University Hospital's innovation partners will be able to achieve results that they cannot achieve anywhere else in the world.

Test beds reaching far beyond the hospital walls

At Karolinska we have an exciting partnership portfolio. We work with companies in information and communication technology and automation technology, as well as more traditional companies in medical technology and life sciences. The common denominator is that all of us want to enter the same playing field.

For example, we are seeing that automation and digitisation offer great potential for society. This also applies to healthcare. Today, data is accessible in a completely different way than before. It is generated everywhere, and our behaviour is mapped in a more sophisticated way than George Orwell could ever have imagined. But it is various service providers – not the state – that are registering our behaviour. In this way information generation inside and outside the healthcare sector is merging in a way that we do not yet understand. These new interfaces are of great interest.

Linking this to the ecosystem for life sciences, we can see that innovators of various kinds need access to test beds that reach far beyond an operating theatre or a trial run for a particular form of care. Our future care chains – and test beds – will encompass entire healthcare or social systems. New Karolinska Solna and the entire cluster emerging in the surrounding area can give us access to this. We are creating a node from different subnodes – Hagastaden, Flemingsberg and Kista in the Stockholm area, as well as Uppsala, Strängnäs and Södertälje – that can interact with other nodes around the world.

Right contacts – and right focus

The university hospital plays an important role in this ecosystem. The various actors need access to a competent university hospital in order to understand the direction in which research should be driven and how newly generated knowledge should be applied.

Here, it is also necessary to have an innovation structure that creates the right interfaces between end users (healthcare), knowledge producers (universities) and equipment manufacturers (industry). At Karolinska this is represented by the Innovation Center, which enables contact between the parties and provides support throughout the innovation process – from the initial idea to the value achieved in everyday healthcare practice. The Innovation Center leads the way to relevant experts, clinics and patients, ensuring that innovation can take place in a clinical setting – without disrupting regular healthcare activities.

Innovations based on demand

Close partnerships in the field of innovation provide healthcare with opportunities to play a prominent part in driving development also within industry. Future technologies will to a greater extent be developed based on the needs identified by healthcare operations, often in areas where no market yet exists. At the same time companies can shorten their time to market, identify new innovation areas and come up with a more relevant product and service portfolio.

This will result in innovations that are in demand, not only at Karolinska University Hospital, but in the entire healthcare sector. It should also be possible to utilise the optimised care processes, equipment and methods we develop as a basis for innovation in other areas, operations and parts of the world – even outside the scope of our partnership. Companies will thus be able to commercialise their products and services and the hospital will be able to evolve and further develop its solutions based on identified needs.

The patient – another key actor

Transparency is necessary – sharing data, problems and knowledge. The rules of the game in the market have changed and it is no longer the most hi-tech equipment that gives the highest marks in the reward system; instead, it is the ability to create patient value. What opportunities are available to individuals as citizens and patients in Stockholm? In the world? This is the decisive competitive factor at the present time, and involves a shift in power. The patient is a force to be reckoned with – a co-actor in how future healthcare will be structured.

The potential to take advantage of this in Sweden is good. We have achieved our leading position in healthcare by taking an attitude of openness, not only in the sphere of healthcare but also through an integration of research and care and an openness towards industry. We now see a need to actively involve another key actor in our future work on innovation: the patient.

Open innovation with healthcare as hub

Considering all this, what is required to turn this vision into reality? Well, we need to be genuinely interested in each other – and have a joint forum in which we can demonstrate this interest. It is true that knowledge is accessible in the virtual world but we also need to have a place where we can meet in person.

This is why the life science cluster we are in the process of building around Nya Karolinska Solna is so valuable. The aim is to create a dynamic environment for translational research and open innovation with healthcare as its hub. An environment in which all relevant parties are involved and provide their perspectives to shape the best possible healthcare for the patients of tomorrow.

This initiative has significance far beyond Stockholm and Sweden. In order to succeed, we need to collaborate with the entire chain of large, medium-sized and small enterprises that contribute to knowledge generation and use the healthcare sector as a test bed.

To draw a comparison with the world of theatre: there's a big difference between being involved in producing the performance and sitting on the fourth row as an audience member. If we do not collaborate with industry, we cannot guide the plot in the desired direction – ending up watching the action from a distance.

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About Development and Innovation, Karolinska University Hospital

- Works strategically with innovation and partnership in order to ensure the best possible care for the patients of tomorrow.
- Coordinates development and innovation at Karolinska University Hospital.
- Establishes national and international partnerships between industry, academia and healthcare.
- Drives development by identifying new areas of innovation.

"Tomorrow's healthcare is being developed in close collaboration between industry and the clinics, researchers and patients at Karolinska. This leads to innovations that are required and demanded by the healthcare sector."

- Johan Permert

