

High Tech Campus Eindhoven: the “Smartest Square Kilometer in the World”!

Travelling around the world, we come across many examples of cities and regions that are claiming to be the next Silicon Valley.

This is not surprising. Governments continuously try to identify and implement policies that promote innovation and, ideally, foster the creation of a “Silicon Valley-like” community of fast-growth, tech-oriented startups. Such a community can provide a powerful source of job creation and economic development.

It is also not surprising that a closer look at these cities and regions reveals that most are not reaching their “full potential”. This has often led to the conclusion that the “replication” of a Silicon Valley-type region or “community” with its unique culture, mindset and values cannot be planned, but rather is the result of a combination of pre-existing capacities and serendipity.

Yet, our personal experience of living and working in a city that aspires to be a startup region suggests that this conclusion needs re-visiting.

In a fast-changing, digital world, the rising influence of three interconnected factors (the exponential growth of disruptive technologies, a sharing economy and a new millennial culture) is driving the emergence of new Silicon Valley-type communities.

To see this, consider the experience of the city of Eindhoven in the Netherlands. It shows that although some foundations are necessary — an infrastructure and various actors, institutions etc. — the real key is to offer *a space of freedom and responsibility*.

Industrial Development

In the formative stages of capitalism, locally based industrial firms often performed a central role in stimulating the economic and social development of a region.

In Eindhoven, for instance, the technology company *Philips* performed this function. Founded in 1891, the company provided the primary source of employment in the city, both directly, but also indirectly via the extended network of smaller companies that were completely dependent on the company for their economic survival.

Interestingly, the role of *Philips* went far beyond simply providing a source of employment. The company would also offer shopping, housing and educational opportunities for workers and their families, as well as recreational activities, for example, via the creation and financing of the local sport team (*PSV Eindhoven*).

In this way, all aspects of economic and social life fell within the ambit of the firm. As such, *Philips* played a central role in the economic growth of the city, but it also created a sense of civic pride and local identity.

The primary task of government – particularly local and regional government – was to support the firm and facilitate its activities.

An Innovation Campus

As any company grows, there is a risk of “silo effects”, i.e., a lack of communication and cooperation between the different divisions or departments of the company and the outside world. Different divisions work independently to their own goals, ignoring the needs of others, and information (and, ultimately customers) get lost somewhere in the middle.

For a company, like *Philips*, that depends on innovation to stay competitive, the risk is that R&D within the different divisions — in the case of *Philips*, lighting, radios and radiology — becomes fragmented in this way, resulting in inefficiencies and lost opportunities.

The solution? Bringing all of the R&D of a company together on a single site in order to promote synergies in R&D. Hence, the creation of the “High Tech Campus” in the late 1990s. The logic of this move? To ensure a more collaborative R&D culture that could help the firm to constantly innovate.

“Open Innovation”

In its early years, however, the Campus was still a “closed” system, in the sense that it comprised solely of the different units of *Philips*. The next step was to acknowledge the benefits of “opening” the campus up to other companies operating in the local area. This happened in 2003.

“Open innovation” guru Henry Chesborough used *Philips* as an example of the benefits of a more inclusive and cooperative attitude towards the development of new technology. By inviting other companies into the campus *Philips* hoped to benefit. “The fence was pulled down”, as Chesborough put it.

“Brainport”

A separate thread of this story concerns the role of government. The local government, in particular, were acutely aware that the regional economy was over-reliant on *Philips* (and, to a lesser degree, truck manufacturer, *DAF*). The risk of such over-reliance was that if the company had problems the whole region would suffer.

The 1990s bankruptcy of *DAF* and re-structuring at *Philips* meant that 36,000 jobs were lost. This experience highlighted the fragility of an over-reliance on one or two industrial-era companies.

Perhaps inevitably, as the shift from an industrial to a knowledge-based society accelerated, the local governments — notably the Mayor of Eindhoven, at the time — recognized the need for collaboration between various key players in the local economy.

The High Tech Campus became the natural focal point of government efforts, resulting in a “triple helix” like cooperation between a range of business, government and the university. The aim was to foster public private partnership focusing on innovation. The label “Brainport” was invented to cover this broader-based cooperation in 2005.

By any metric, Brainport seems to have been a success. Eindhoven was labeled the “smartest region in world” by *The Intelligent Community Forum* (ICF) in 2011. *Forbes* named it the most inventive city with 22.6 patents for every 10,000 residents (second place was San Diego with 8.9). *Fortune* identified Eindhoven as one of the seven best global cities for startups.

The Brainport website now refers to the High Tech Campus as the “smartest square km in the world” with more than 150 companies, such as *Philips, Philips Lighting, NXP, IBM, Intel*, and 10,000 employees.

The High Tech Campus 2.0

No doubt the region has become a hub for knowledge, but how can this knowledge be translated into the creation of new business. Ensuring that great ideas make it to market and are commercially successful is central to the real success of an innovation community.

Stated bluntly, how can we ensure that all (or, at least, most) of the “research” in Brainport is commercialized (i.e., that local knowledge-producers embrace entrepreneurship and that national and global investors are made aware of the opportunities)?

Obviously, one way of doing this is to develop the business building capacities and resources of the High Tech Campus and to make it more attractive as a startup hub. In this context, a number of initiatives, have been taken including the introduction of a better infrastructure for business-building (establishing incubators, an accelerator and flexible office spaces), as well as developing the “soft” infrastructure, via supermarkets, gyms, conference center, exhibitions, art, open spaces, “street food” and transportation.

In this way, it is hoped that stronger healthier businesses — ideally with the potential to be globally successful — emerge out of “Brainport”.

“... But, Something is Not Quite Right Yet”

With everything in place to make the High Tech Campus more entrepreneurial, we can be cautiously optimistic about the future.

Nevertheless, compared to Silicon Valley, something is still missing. The full potential of the region is not yet fully realized.

So, what then is this missing “secret sauce”?

People keep focusing on the typical “ingredients”, i.e., identifying those elements that will create a flourishing environment for innovation. There is a lot of talk about the need for more entrepreneurs, the need to activate private investors and to identify and “activate” alternative financial sources. Of course, these things do matter. A startup community does need to offer a ready-made network of connections to national and international resources, as well as providing the means for building capacities and a sense of vision.

Nevertheless, it can often seem as if everyone is running in circles and focusing on the same issues. But, maybe, what the High Tech Campus is missing is that the “corporate fence” was never really pulled down, as Chesborough suggested.

For instance, when you first enter the High Tech Campus, you are confronted by its “General Rules”. All nine pages of them. The following are just a sample:

- Persons entering High Tech Campus Eindhoven are deemed to know the general rules.
- People wanting to enter High Tech Campus Eindhoven – either as worker or as visitor – can do so undisturbed from 06:30 to 20:30 on working days. Access times may be altered as deemed necessary.
- Access to High Tech Campus Eindhoven outside opening times without a Campus badge is only permitted in consultation with and with permission of security personnel. All unauthorized persons must leave the Campus after opening hours.
- After opening hours all people working alone need to follow the rules of their employer
- No pets are permitted.

For some, these rules might appear to make perfect sense.

Yet, startups and other firms in the new digital economy recognize the important role of a more open campus policy. For instance, Palo Alto's cloud and virtualization company *VMware* allows family, friends and dogs on their campus. San Francisco's *Salesforce* has a "pet-friendly" approach, *Puppyforce*. *Google's* code of conduct explicitly includes a Dog Policy:

Google's affection for our canine friends is an integral facet of our corporate culture. We like cats, but we're a dog company, so as a general rule we feel cats visiting our offices would be fairly stressed out.

Pets can also play an important role at venture capital firms. For example, the Chief Happiness Officer of well-respected German VC firm, *Earlybird*, responsible for "keeping spirits up" is a black Labrador named Cooper.

The High Tech Campus as an "Open and Inclusive Community"

The existence of formal "rules" of this kind encourages the type of "9 to 5" corporate mentality that is so alien to genuine innovation and entrepreneurship.

In order to reach its full potential, it is necessary to make the shift from a closed R&D campus to a new open and inclusive innovation community. And this means making one final step:

The High Tech Campus should abandon the kind of "corporate attitude", which is a relic from *its* industrial past, and embrace a more flexible and open culture of **freedom and responsibility**.



Indeed, there are more and more examples of how a “corporate attitude” kills creativity and “out-of-the box thinking”. A culture (and mindset) of freedom is necessary to foster the experimentation and innovation that is necessary to succeed in the context of the contemporary economy.

With “freedom” we don’t suggest an anarchic “Wild West” approach to innovation and entrepreneurship. Complete freedom can legitimately be criticized on the grounds that it simply will not work, particularly in a large and expanding community, such as the High Tech Campus. It will merely result in chaos and, ultimately, the disintegration of the community.

The principle of “responsibility” is necessary to maintain accountability and establish an effective and collaborative way of working built on trust. This can be contrasted with an approach that aims at building an infrastructure, based on the implementation and supervision of rules.

And this is where the High Tech Campus and its surroundings in Brainport can leapfrog other innovation communities. The exponential growth of technology, the sharing economy and a millennial culture forces both established and startup companies on the High Tech Campus to adopt and embrace the inclusiveness of an open ecosystem. It is clear that operating in an open and inclusive innovation community has a crucial role to play in facilitating firms — new and old — in making this transition.

Since the elements of openness and inclusiveness become more important to companies, the pressure on the High Tech Campus to make the final step to an “open community” will only increase. And this is a positive development. It will make the campus (besides being the “smartest square kilometer”) one of the most *entrepreneurial* square kilometers in the world, becoming even more attractive to companies, developers, creators and investors.