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Between Urbanity and Creative Village: New Infrastructures of Innovation and Their Representation on the Internet / How Berlin-Adlershof Markets Itself Online

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Author :

Alexander Seiffert

Technology Park Berlin Adlershof，Germany

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中关村 Z-Park ZHONGGUANCUN SCIENCE PARK

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Introduction

Science and Technology Parks (STP) are designed to foster innovation. They aim to accommodate a highly creative workforce. But under the conditions of changing labor markets, it is increasingly difficult to attract the best talents. Hence, Areas of Innovation (AI) must adapt to the needs of a new creative class. In this respect, the paper explores three related questions:

1) What are the new needs of the emerging creative class?
2) How do the changes in the labor market affect the physical design and layout of STPs?
3) How are these developments represented online?

Finally, the paper gives a brief summary of how the Science and Technology Park Berlin Adlershof managed its transformation and how it markets itself online.

No innovation without innovators

Human history is a history of innovations. New ideas led to new technologies, which sparked socio-economic changes, which, again, brought new ideas. This circle of creativity and growth spins even faster in the age of globalization and "knowledge based" industries. Investors want returns. Returns come from growth. Growth comes from innovation. Without innovations no modern business or society can exist. Innovations are at the core of capitalism – or, as Karl Marx and Friedrich Engels put it in their Communist Manifesto of 1848:
"The bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society. (…)All fixed, fast-frozen relations, with their train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air..."[1]

But what makes us as individuals and as a society innovative? What lets new ideas bloom and creativity flow? Do innovation and individuality go hand in hand? Or can we imagine a sustainable climate of innovation without individual freedom? What exactly sparks inventions? According to US- cultural theorist Richard Florida, it's the three Big T's: Talent, Technology and Tolerance.

The three T's are all required for growth (...) At the point where they converge, an unbeatable critical mass of human capital, infrastructure and quality of life forms. First, well-educated specialists, particularly in industries with bright futures such as information technology and engineering; second, a research environment with

1. in: Manifesto of the Communist Party by Karl Marx and Friedrich Engels, English Edition by Andy Blunden 2004, S. 16.
2. in: „Where Germany's potentials lie" by Dr. Steffen Kröhnert Dr. Reiner Klingholz

high-quality educational institutions and the capacity to transform knowledge into profitable inventions; and third, an openness and tolerance toward immigrants, minorities and individuals active in the arts. The fact is that the places where these people can create homes and feel accepted will be infused with a social climate in which the elite members of the creative economy feel comfortable. Wherever this elite lives, thinks and works, wealth and new jobs will be created, producing an environment that will attract creative people and motivate them to stay."[2]

For Florida, 'tolerance' implies a broader culture of freedom: the free flow of information and ideas, as well as political, economic and cultural freedom for individuals.

The free flow of ideas that is necessary for sparking innovation depends on the existence of individual freedom. What does this imply for those individuals, businesses, governments and projects that seek to attract talent and foster innovation?

The rising high-tech classes, the technological and creative elites of the advanced industrialized countries, are claiming the right to choose where and at what they want to work. That distinguishes them not only from their fellow, less "gifted" peers on the labor market, but also from their predecessors. At no time in history have "nerds" more influence on the economy, more leverage in business or more clout in politics.

Creativity seems to rule, and creative folks seem to prefer open and diverse environments. The intellectual front runners of our time are no longer just demanding economic rewards: "My house. My car. My boat." Instead, they call for decentralized management structures, flat hierarchies, diverse and stimulating cultural influences in a tolerant work environment. In other words, they want what sociologists would call "soft factors" in exchange for their skills and inventiveness. Those factors – of which tolerance might be the most important - become increasingly decisive in the race to attract talent.

That race of course is happening in sharp contrast to the increasing impoverishment and marginalization of the vast majority of the global work force, made up of people who can only dream of choices and tolerance. Those who form the bottom ranks of our global high-tech economy-- the outsourced-online-service personnel, the countless call center employees and the unnamed assembly line workers in high and low tech businesses might believe - and are made believe - that one day their efforts will pay off, but this is seldom the case. In fact, these workers are nothing less than the dark underside of the new TTT wonder world.

Richard Florida argues that those of us interested in "innovation" cannot ignore those at the bottom of the tech economy. He writes, "It is vital to bridge the divide between the prosperous creative class and the rest of society. … I think the real task of leadership has to be to show that each person has to have a way to fit into this new creative economy, and that there's a future for them. If this divide remains between the creative classes and the others we are all in trouble."[3]

Changing labor markets are changing the aims and layouts of areas of innovation

Where do Science and Technology Parks and Areas of Innovation fit in the larger scheme of the global innovation economy? First of all, they provide the physical infrastructure for innovation: labs, offices and production space. But beyond that, such science clusters are physical representations of how we

3. in "Talent loves Tolerance"; Silicon Republic, Interview with Richard Florida by Ann O'Dea 15.08.2013

conceptualize the processes of innovation. In other words, they are spatial representations of our knowledge-driven economies. As our economy and society transform from “Fordism” to “Post-Fordism” to “Knowledge-based,” the spatial patterns of innovation change too. New ideas about what constitutes the best conditions for creativity and innovations shape the actual architectural layout. The first “technology parks” were designed as mere facilities for work, study and research. They were located in green, healthy environments outside of cities. Le Corbusier’s notion of the “separation of uses” (working, housing, recreation) in urban planning was rooted in the desire to overcome the unhealthy and chaotic living conditions of the 19th century cities. It provided the rationale for putting these technology parks at a distance from urban centers. Housing, shopping and cultural activities were not part of the vision for such places.

Although urban planners abandoned Le Corbusier’s paradigm over a long and often painful learning process - starting in the late 60s and culminating in the more recent return to the dense “Old European City” as an ideal model for city planning - the idea of separate, isolated “parks” for science and technology still prevails today. In fact, the concept of setting aside extra-urban space for STPs began to gain international favor at the very same time that the functional separation of work and life in urban planning had been identified as harmful. Even as cities began to revitalize their cores, pushing back car traffic and reclaiming traditional mixes of uses within their boundaries, they were also designing and building science parks, often far away from these revitalized cores, almost as if they were fair grounds or amusement parks.

Unlike the other urban environments being designed, these early STPs were meant to be a kind of special resort for scientist and investors. “Science and Technology Park” evoked an image of shiny glass and steel buildings with clean, sunny lanes, where happy young professionals headed towards brand-new labs in which great products for a bright future would be invented.

And despite its questionable, if not outdated formula, this general concept of STPs was a great success. Many of those parks developed fast and prospered financially. Many well paid jobs for highly qualified staff in thriving new industries were created, in these STPs. They were business accelerators and job-machines. They had - and continue to have - tremendous growth effects for their communities. They function as pioneers, as laboratories to experiment with new consumer technologies before those technologies enter the market, e.g. smart city concepts, e-mobility, low-energy construction, linked-in-production and so on. This success seemed to prove that the concept was a good one. Thus, the anti-urban concept of STPs became a blueprint for promoting development and growth worldwide.

General wisdom says: “Never change a winning game.” So why has the original idea of parks as a physical home to science and technology has come under scrutiny? Can it be that the growth and development sparked by those clusters has happened not because of their physical layout but despite it? How come today’s startups often settle their business in converted factory spaces within established urban districts, rather than in the neat, newly built office towers on the outskirts? What is the appeal of a mixed neighborhood for young creatives? And does that matter for the layouts of future innovation infrastructures? Will it be the nerds with their hipster attitudes and super-individual needs who dig the grave for the traditional science and technology park?

Because we have regarded STPs and AI as wildly successful, we have tended to ask the question, “How are STPs and AI influencing society and especially cities?”. But as we move forward, an equally important question will be, “How are the concepts and layouts of STPs changing due to new needs of the urban creative class?”

In that respect, the STPs test-projects of “smart”, and “linked” and “e-something” are not a one-way road,

infusing our cities, transforming them into sci-fi environments with “full connectivity” and “always-on”-residents. It also happens the other way around: The urban energy of city life shall vitalize and juvenile the conventional mono-thematic, functionally separated STPs, transforming them into truly inspiring neighborhoods. Maybe we in the STP community were always only looking in one direction, asking, “What can the science parks do for the old cities?” But an equally interesting question is: “What can science clusters learn from traditional urban space?”

Let’s get back for a moment to Richard Florida’s Three Big T’s and society’s task of bridging the divide between the creative class and the more traditional parts of the labor force. How do private enterprises approach these questions and how do public/private projects like STPs or AI deal with it? Over the last 10 to 15 years there has been a growing consensus that better “diversity management” is critical for the wellbeing of the economic sphere. Enterprises should provide equal chances for women, LGBT people, immigrants, the disabled and minorities in general. The argument for this is not only one of social justice and social harmony, but an economic one as well. Companies who diversify their workforce, the argument goes, do not only experience an increase in productivity, they also tend to be more innovative. Diversity sparks creativity, thus leading to competitive advantages.

What is starting to work for companies can as well be applied to entire industries, e.g. science clusters, when we broaden the concept of diversity. Apparently, well managed diversity is healthy and inspiring; it helps creating a climate of creativity and productivity and can contribute to economic success. And how do we achieve it? For the physical infrastructure we can achieve it through a certain degree of density, proximity and human scale. Think of a lively neighborhood, a busy street corner with its “expected unpredictability.” As Jane Jacobs noted in her groundbreaking work “Life and death of the great American city”, it is the pedestrian level, the “sidewalk ballet”, the corner store, which make so much for the vibrancy of our cities. If we want diversity as a stimulant for creativity, we must also provide for the physical infrastructure that enables it. But did we design our want-to-be “creative hubs”, science parks, research clusters, etc. along those lines? Have we put the little corner store in the focus of planning? Or rather the representative entrance lobbies of fancy technology centers? A vibrant urban environment is very appealing for everybody who craves stimulation. It is fertile ground for the new creative class which is understood to be necessary to driving innovation. So if we want to know, whether and how a special physical infrastructure of innovation, e.g. a science park, an area of innovation or any sort of science cluster can meet future needs - whether it will maintain growth and productivity - we have to look for signs of diversity: we have to look for the “busy street corner”.

If we agree that the existence of urban structures in STP’s, such as housing, shopping, recreational and cultural facilities—which together help make up the “busy street corner”--are valuable indicators for how innovative a science cluster is - and potentially will be in the future, – then it’s worth taking a closer look at the degree of urbanity in science clusters. Is a STP or AI a fit competitor in the battle for the talent of the new creative class? If we find only few, or no signs of urban life and diversity in the physical infrastructure and layout of any science area, if instead we find homogenous research and/or business real estate facilities among greenery, then such a campus is lacking essential factors for future success.

The lack of sensual stimuli can become an obstacle to attracting talent. And it might even cause an exodus of brain power. What once was sufficient - comfortable working space, green lawns, plenty of parking lots and a canteen, will no longer do. Future employees, especially members of the creative class, demand - and can demand - flexible hours, hang-outs, short distances between home and work, accessibility by various modes of transportation, mass transit options, bike lanes and a rich cultural life at their doorstep. The era of STPs and AI looking like glossy images from science fiction movies is coming to an end. The transformations are already taking place. Startup companies, which used to be one major target of STPs, begin to avoid

parks and instead settle in the city centers. Interestingly, those young companies are not “voting with their feet” against the idea of an innovative science community itself, but rather against an anti-urban concept of planning. To see these signs does not mean we have to give up on the idea of parks for science and technology entirely. But we have to change the concept and specifically the layout of AI-communities. Even minor adjustments in the architecture of our research and office units can make a huge difference. Let’s get more urban! And as with many things, the internet is a good place to begin when it comes to building a fine neighborhood.

Once more: the internet solves it all, or does it?

In real life, the transformation from park to neighborhood will take some time. Urbanity cannot be created overnight. Neighborhoods grow slowly. Planning and construction is costly and difficult. But once you've made the decision to move towards it, you can immediately start to change your image. It can happen today at little cost. It can happen online. You can reinvent yourself on the internet, move from that homogenous research, business and investment project near the highway exit towards the idea of a creative hub with all kinds of stimulating activities and a diverse crowd of people: Some of whom are geniuses in their field, many of whom are highly innovative, but most importantly: all of whom are part of a neighborhood to be.

The internet can do a lot for us. And don’t just think of its latest features like “Enterprise 2.0”, “Web 3.0” or “Industry 4.0”. These are fascinating developments and they will certainly affect STPs and AI a great deal. But I want you right now to think first of the old-fashioned, content-driven Web 1.0 homepage.
Despite the growing importance of Social Media channels like Facebook, Twitter or Youtube, most people who want to learn about your business or project still go to your “classic” website first. And it is very important not to lose these potential customers or partners, before you even have a chance to properly introduce yourself. The first few clicks may well determine whether a user continues to browse and whether that user will eventually get in touch with you.

That is to say, the image of your project on the internet can be a very powerful tool. It can attract attention. Or it can scare away the user. Much can go wrong in those first few moments between you and a potential partner, especially if you don’t know who your customer is and what exactly he or she is looking for. Is it real estate? Is it stories? Is it event venues? Is it business partners? Does she want to sell? Does he want to buy? Is she a journalist who wants to write an article? Is he an investor?

You don't know the answers to these questions. But don't worry! Of course, you could spend a lot of time and money on market research to find out more about this “big unknown” online visitor, but at the end it is not really important. Why not? Because every single user who comes to your website matters. He made an effort. She chose to dedicate some of her time to looking at your site. And because you cannot possibly know who comes to your site, you can only design it with the obvious in mind: Don’t confuse newcomers. Be clear about who you are and what you do. Keep your data up to date. Don’t be boring. And most importantly: Be nice to your stake holders—the ones who already know you--because there is no better word in sales than the word of mouth.

And there is one more thing you should keep in mind about your web-audience: Because you don’t run a department store or a mere real estate company, but rather a project whose core business is innovation, you must attract the creative crowd! In that respect, you would much rather look like Times Square than, let’s say, a highway intersection. And even if you ARE a highway-intersection, make yourself look a little bit like Times Square, or at least like the busy street corner. In order to appeal to the creative class – and you can’t survive

as an AI without it – start to build the busy street corner on the internet, even if the busy corner does not yet exist in your real word. Members of the STP and AI community, who have currently few or too little urban infrastructure, can start creating their virtual neighborhood. (Not to be confused with bogus platforms like "Second Life", avatars and fake realities.) The only thing which can turn a homepage into the foundation for a virtual community is relevant and diverse content that goes beyond real estate data and the announcement of business establishments. Think of such a virtual neighborhood as a news stand, where people hang out, chat, study or just are curious.

The transformation of Adlershof from gated science community to neighborhood

The decision to dedicate a certain territory to promote science and technology is usually the result of a complicated political process that involves various public and private players. The goals are economic growth, job creation, tax revenues via real estate and infrastructure developments.

In that respect, the construction of the Science and Technology Park Berlin Adlershof was no exception. Luckily, Adlershof was from the start both an effort to promote economic growth and an urban development project.

Situated in the south-east of Berlin, the district of Adlershof consists of two rather antagonistic parts: on one side the old town with about 15,000 residents and on the other the former industrial and research site, which had been fenced off from the rest of the city for almost a century. This is the site of Germany's first airfield, Johannisthal-Adlershof. It was a place of work, not a residential area. It has witnessed many moments of historic change, from the rise and fall of the German Empire, to the Weimar Republic, to the Nazi regime, to the Soviet occupation and East Germany. The fall of the Berlin Wall led again to rapid political, economic and social transformations. East Germany and Berlin suffered from severe deindustrialization. For the industrial part of Adlershof this trend meant the vacating of the site by East Germany's state television and its Academy of Science with its more than 15,000 employees.

To ease the transformation from planned economy to a free market, the newly reconstituted government of the state of Berlin created special development zones and launched a long term economic- and urban planning program to promote growth. The city's district of Adlershof became one of those zones. Several scientific institutions, such as Humboldt University and ten federal research facilities, like the national aeronautics and space research center DLR, were relocated to the emerging campus.

Step by step, this development strategy began to work at Adlershof. Small and medium sized businesses, many of which were founded by former employees of the dissolved East German Academy of Science, came to the new park. More high-tech companies from around the country relocated there, too, because of Adlershof's newly built technology centers and close proximity to renowned research institutes in Berlin. After roughly a decade of public and private investments, Adlershof became Germany's leading science- and technology park. Today it is home to more than 1,000 enterprises, including Humboldt University's natural sciences campus and the capital's #1 media hub, Studio Adlershof.

This development was not without problems. The science park developed much faster than its surrounding neighborhoods. New tensions between those neighborhoods and the park's businesses arose from this disproportionate development. And despite the growing number of people working and studying on campus, it took a very long time for new interdisciplinary networks to form and projects to get off the ground. In order to encourage interaction and communication between different groups and players, the park's publicly owned

management company WISTA started activities to promote new modes of collaboration, both within the science park, and between the park and its neighbors. Special conferences, workshops and big events, like the “Long Night of Sciences”, a “Resource Knowledge” lecture series and special “Days of Research” were established, and the science park’s website, www.adlershof.de, played a key role in this process. Soon, the internet became the decisive tool in bringing people and ideas together. The website helped shaping the location’s identity (“Adlershof. Science at Work”) by addressing different audiences, including entrepreneurs, students, investors and inhabitants, on one platform.

By offering this one-stop-online-service for various target groups - from scientists, to journalists, to businesspeople, to the general public - the website became the main and credible source of information about Adlershof’s products and services, thus establishing a strong reputation amongst all partners. Increasing numbers of links and backlinks eventually resulted in an exceptionally strong Google Page Rank. The high ranking then helped pushing Adlershof’s web content among the top Google search results for major business-relevant keywords, eg. photovoltaics, event services, real estate, etc. In comparison to most of Germanys and many international technology clusters, Adlershof’s products and facilities are significantly more visible on the internet: a huge competitive advantage for the entire project and its partners. It is the result of WISTA Managements long term online strategy.

What were the decisive steps?

1. Outsourcing of online activities to external agencies was terminated. An in-house web team was assigned to assure a constant news flow of fresh and relevant web content, as well as basic technical support of the website.

2. Originally five separate hompages of WISTA and its subsidiaries were merged into one platform with one content management system, thereby reducing costs, eliminating double content and outdated information. This immediately resulted in significantly improved SEO Rankings.

3. A comprehensive business directory of all residing companies and institutions was implemented, forming the backbone of the new platform.

4. The directory’s company-profiles became the nucleus of the interactive user interface “MyAdlershof”, where users can create, edit and publish their own content like news, classifieds, events, etc.

5. Last but not least, in 2010 Adlershof launched social media activities with profiles on Facebook, Twitter and Youtube. Up to 68,000 fans follow the science park’s news and events on those channels, giving Adlershof the opportunity to reach out to new partners and customers.

Conclusion

The 20th century concept of dedicated innovation-infrastructure such as STPs and AI pushed and nourished great technological innovations and contributed to the economic growth of surrounding communities and societies. In order to maintain and fuel further such developments, the layout of current and future science clusters has to change, moving toward a model of, and connection with, urban structures with mixed uses, such as housing, commerce and cultural facilities. Innovation requires creativity which is increasingly attracted by diversity. Additionally, the gap between the “creative class” and the non-elites can best be bridged

in appropriate and proven physical structures called neighborhoods. Exclusive “gated science communities” with glossy architecture and fancy semi-public open spaces are neither intellectually stimulating nor socially desirable. They might resemble false images of how architecture of innovation should look like, routed in cultural stereotypes - but as harbors of new ideas they become obstacles.

Not in any case, a physical transformation of STP’s and AI into mixed use neighborhoods will be possible - or even desirable. Emissions might pose risks or topographic limits may occur. Economic, legal or other political reasons can also hinder new developments. But even then it is possible to incorporate the idea of diversity and neighborhood: by changing the image and presentation. The internet is a great tool for that. It doesn’t take new construction. You don’t need a bulldozer or a crane, not even a shovel. All it takes is an idea of what you want to be. So be creative![4]

4. “Creativity is the great leveler. It will not withstand to be bound by the social categories we impose on ourselves. … That’s the real stuff of economic growth and the logic of economic development in our time means that those individuals, companies and places that can accelerate the harnessing of that creative energy, the places that can tap deepest into that mine of creativity and attract it from elsewhere, they gain competitive advantage.” (in: “Talent loves Tolerance”; Silicon Republic, Interview with Richard Florida by Ann O'Dea 15.08.2013