

Gdynia, Poland

A new home for innovation on the Baltic

Gdynia has opened the new Pomeranian Science and Technology Park in a disused bus garage, to transfer technology between universities and industry, including an Innovation and Entrepreneurship Incubator. The park's presence has transformed its neighbourhood, encouraged private investment nearby, and re-established Gdynia's reputation for innovation and modernity. The project is an example of stepwise development, where new possibilities open up along the way. Alongside its three original pillars of biotechnology, ICT and design, it has added a fourth – social innovation. The park is now under expansion and will eventually house 300 more firms, as well as an educational science centre and numerous other facilities.

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After the war, Gdynia became one of the most open Polish cities, connected through its port with the rest of the world – unlike the rest of largely landlocked Poland. In 1970, a full 20 years before the fall of the Berlin wall, dockyard workers protested against the political order and started the struggle to end totalitarianism. When this came about, the political changes after 1989 were sometimes tough, especially for young people. Rapid change meant that their education no longer fitted the needs of the market. It also provoked a crisis of emigration.

One aim of the municipality was to stem this brain-drain. The idea of establishing the Pomeranian Science and Technology Park in Gdynia gave substance to the idea of improving conditions for knowledge-based industries. In 2001 feasibility studies for the new project were undertaken, with the participation of the Gdynia authorities, the universities and local businesses. The park had to achieve two goals simultaneously: to animate technological innovation and also to modernise the city itself.

As a location for the park, the former trolleybus garage was chosen; this had been used during the war as an aircraft factory and was located on the major road leading into the city. The sheds were taken over by the municipality in stages. In 2003 the first five firms moved to the site. After the buses were rehoused, the garage's arched halls were adapted in 2004-2006 to provide offices and laboratories. A two-storey structure was erected inside the hall, providing room for 50 new firms.

The park aims to transfer technology between universities and industry. Since the outset, its profile has consisted of three pillars: biotechnology, ICT and design. ICT and design are very cooperative domains, demanding the cooperation of different partners, which is the essence of the park. Since 2010, social innovation has been introduced as a new pillar, since Gdynia has been actively implementing innovations in the social sphere. As a result social innovators now have their own official place at the Pomeranian Science and Technology Park.

Owing to the project Gdynia has been able to return to its growth path and became a pioneer among Polish cities. Already recognised for its port and shipyards, it has become a centre of modern technologies. Today it is perceived as the modern city, and the Pomeranian Science and Technology Park is a symbol of this transformation. It has also changed the quality of the public space of the whole district in which it stands, connecting it with the town centre and improving the neglected post-industrial areas. At the same time the park has encouraged private investment in the area.

The city's initiative has paved the way for personal development for many young people: the park is the place where people get together and – because they are creative – come up with ways to improve their social and professional situation.

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In 1920, after the Treaty of Versailles, the new state of Poland was awarded a short section of the Baltic coast. Considering the unstable political situation in the Free City of Gdańsk, the government decided to build a new seaport at the summer resort of Gdynia, 20 kilometres to the north-west, which at the time was a village of around a thousand residents. In April 1923 a temporary port was opened, and in August of that year the first ocean-going ship docked in Gdynia. At the same time the building of the city started. At the beginning of 1926 Gdynia was awarded a city charter. By then it had 12 000 inhabitants. In 1934 it became the leading port on the Baltic Sea by volume of cargo, and at the same time the most modern port in Europe. By 1939 the city had 127 000 inhabitants. From a small fishing village, within 20 years it had grown to be a modern city, fully equipped with infrastructure, and with a rich cultural and scientific life. The sharp rise in population was caused by an influx of workers from all over the country, but especially from Pomerania.



Fig. 1. General view of the city and port (photo: Maciej Bejm, UM Gdynia archive)

During World War II the city was occupied. Invaders changed the city's name to Gotenhafen, and displaced much of the population. The war caused considerable destruction to the port, and by 1945 its population had dropped to 74 000. The post-war period under communism led to the further dynamic development of the port and of the accompanying infrastructure, which again pushed Gdynia to the top of the league of the fastest-growing cities in Poland.

In December 1970 the town's dockyard workers and inhabitants protested against the existing political order. The ensuing repression by the 'defence forces' left many people killed or injured. These events were the basis of the famous Andrzej Wajda film *Man of Iron*. But the real transformation of the political system had to wait until 1989.

The collapse of communism in 1989 allowed the city to return to its previous growth path. One of the first results of the transformation in Poland was the introduction of the municipal system, which encouraged cities to define their own paths to development. Gdynia became a leader among Polish cities, undertaking new challenges. Today it remains the one of most important and most modern Baltic ports and one of the greatest Polish cities.

Stopping the brain-drain

New circumstances brought the city not only opportunities but also problems. The free market has threatened the traditional industries, such as the shipyard, which was the main employer in town. Open borders caused a brain-drain, and the city leaders knew that the outflow of educated people would make the necessary economic transformations more difficult. Gdynia municipality decided to counteract all of these problems.

In the 90s, Poland's public administration system was rather traditional in terms of governance and public participation. In Gdynia the openness of the authorities has broken

the mould. The third sector has been brought into strategic planning in the social sphere, as well as into operational planning and concrete activities. One example is the annual 'Gdynia Business Plan' contest. Young people from across the whole country were encouraged to submit their own innovative ideas, described in the form of a feasible project to create commercial activity and innovative products. The prize was the municipality's support to implementation the winning ideas – and the condition was the location of activities in Gdynia. Today some of the winners are joint stock companies with offices around the world. That spirit of enterprise remains in Gdynia.



The municipality sought to make Gdynia attractive for young people at a time when other cities did not bother with youth. It invited a music festival which had originated in Warsaw to relocate. Today the Open'er Festival, held at Gdynia's former airfield, has become the most important music festival in Poland, attracting tens of thousands of participants for several days each summer. Today a lot is happening in the city in the sphere of culture, and its Modernist heritage is a backdrop which stimulates applied arts and design. The Baltic location helps international networking in this domain, supporting the simplicity and purity of form which is characteristic of Scandinavia and the Baltic. In such geographical circumstances it would be hard not to become the country's leader.

At the end of the 1990s Professor Anna Podhanska from the Gdańsk Medical University tried to set up a science park dedicated to biotechnology. At this stage there was already in Gdynia the Intercollegiate Faculty of Biotechnology, connecting scientists from three specialist colleges. But its graduates could not find jobs and often emigrated abroad or took on lower quality jobs in other fields. At that time most city leaders thought that the stimulation of collaboration between the research sector and industry was not a task for local government. So at the time Professor Podhanska's efforts had no resonance. Things stayed that way until a critical meeting in Gdynia town hall.

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Old trolleybus garage, new technology park

This led to the idea of establishing the Pomeranian Science and Technology Park (Pomorski Park Naukowo-Technologiczny – PPNT) in Gdynia to give substance to the hope of improving conditions for professional development. In 2001 feasibility studies for the new project were undertaken, with the participation of the Gdynia authorities, universities and local businesses, represented by the Pomeranian Centre of Technology Association. From the outset the municipality treated the project comprehensively – not only as a support for firms starting in business but as a driver for the future. The park had to achieve two goals simultaneously – not only to animate technological innovation but, more importantly, to modernise the city itself.

The key decision was where to site the park. The area which had been the bus and trolleybus garage was chosen. It stood close to the railway station, and at the far end of the main axis of the city centre. This district was not attractive, due to the state of buildings and surroundings.

The municipality took the buildings over in stages, starting with the offices and the mechanics' training centre. Initially some units of the municipality relocated there, then gradually more and more of the floor space was occupied by the new park. In 2003 the first five firms moved in. As the initiative developed, the park needed more space. The time for the strategic decision had come: the demolition of the bus garage.

Design, a motor of innovation

Pioneers usually bear an increased risk. A project that is completely innovative on the national scale can find no guidance from previous experience. Knowing this, the Gdynia authorities tried to act very carefully, without losing their deep conviction and belief in their strategic targets. All ideas were first tested and only after they were proven were they fully implemented. Thus the Pomeranian Science and Technology Park started life with five firms, and with the management delegated to one of the original partners – the Pomeranian Centre of Technology Association.

The park's main tasks were to act as a focus for activities of all kinds related to the economic development of the Pomeranian Region, and to stimulate co-operation between universities and companies, especially in the field of technology transfer and the development of entrepreneurship. The main beneficiaries were to be the region's entrepreneurs and universities. At the beginning the park's profile consisted of three pillars: biotechnology, ICT and design, and this third pillar on design was a kind of extravagance at that time. But whether by luck or intuition, it turned out that this focus on design favoured true innovation.

The beginnings of the park seemed promising. After the removal of the buses, there remained the arched halls which had been built before the war. During the war the Messerschmitt aircraft company had operated here. Although the buildings were abandoned, adapting them to the park's needs demanded a lot of financial resources. EU finance of €2.5 million from the PHARE programme was awarded out of the total budget of €3.5 million. The adaptation of the vaulted halls into office spaces and laboratories began in 2004 and was completed in 2006. A further €150 000 was awarded for the organisation of the Pomeranian Incubator of Innovation and Entrepreneurship, as a key part of the park.



Fig. 3. The two-storey structure within the arched halls (Photo: Tomasz Kamiński, PPNT archive)

A home for projects, not firms

A two-storey structure was developed in the interior of the arched halls, providing room for 50 new firms. The task of managing the park, developing it and preparing innovative projects was handed over in autumn 2004 to the Gdynia Innovation Centre, a unit under the auspices of the City Hall. This solution is unique even today – in Poland most science parks are managed commercially, even if their main or sole shareholder is the municipality.

The park hosts projects, not firms. The selection of candidates is the task of the Scientific Council, which evaluates the applications. Space is leased for two or three years, according to the project's schedule. The project's results are subject to verification by the park's manager. New contracts can be signed only for new initiatives, which sustain the innovative profile of the park. In addition to the lease of spaces the park offers a professional consulting programme, free of charge for firms beginning their activity within the incubator, as well as special rent reductions. Firms already established obtain smaller levels of public support. However all of them participate in formal and informal integrative actions, creating the

innovative atmosphere of the park. The incubator also works with firms that are not based in the park which have their own special formula for participation without leasing workspace.

One aim of the park is to transfer technology between universities and industry. As a result it cooperates with universities, technical universities, technology transfer centres, other parks and institutions connected with entrepreneurship and innovation. The park has spent almost €2 million on research equipment.

The Biotechnological Laboratory (Bio-Lab Centre) serves as a strategic element of the park – the infrastructure which Gdynia offers to entrepreneurs and scientists dealing with biotechnology and environment protection issues. The goal of The Bio-Lab Centre is to provide a wide range of reliable research to meet companies' needs. It is dedicated to biotechnological, biochemical, microbiological, molecular biology, environmental and chemical analyses, research and investigation, for the local scientific community as well as biomedical companies worldwide.

Smart specialisation

Over a decade of activities the technology park has filled up with firms. The ICT pillar has developed most quickly – particularly firms in automation and robotics, multimedia and electronics. For this pillar the technologically advanced telematics infrastructure of the park has been a great asset. The creation of the new electronic laboratory is under way. It will be equipped with devices that single firms cannot afford.

From the biotechnology pillar, a specialisation in environmental protection has developed with firms using different technologies in fields such as solar power.

The Regional Design Centre, located in the park, supports the development of creative industries, companies and projects related to industrial design, graphic design, multimedia and architecture. It also coordinates all design-related initiatives and events in the city, organising international projects, educational activities, exhibitions and events promoting design, such as the Gdynia Design Days. The centre's activities also have direct advantages for the city. For example the 'Design for All' workshops were held to improve the quality of life of Gdynia residents. Some activities were dedicated to civil servants whose decisions have a significant impact on the appearance and functionality of the city. This involves people responsible for municipal investments, buildings, roads, green areas, culture, architecture and spatial planning. They were encouraged to take a new look at public space. The best projects and designs developed in these workshops will be implemented by the city.

Firms dealing with design are mostly small, most often an individual's design studios, so they need access to services for the creation of prototypes. The park already offers a rapid prototyping hall, and a new one, considerably larger and better equipped, is being prepared.

These actions have demonstrated the great potential of young artists, mostly students at the Gdańsk Academy of Fine Arts. In order to implement their designs the young designers need access to modern technologies and contact with users. To meet these needs, from autumn 2012 the park will host one of the studios of the Gdańsk Academy of Fine Arts, to connect study with practice. Initially the park will offer 300 square metres of space. But in the following year this space will increase, to enable the relocation of the studios of the design faculty.

The park is also supporting the fashion industry. This led to the idea of the Baltic Fashion project, which promotes the innovative fashion industry in the Baltic Sea region. The park has received over €220 000 from the EU's South Baltic Programme for this activity. The goal was to strengthen international collaboration in the fashion sector in the region by creating an information platform, analysing statistical data and introducing good practices and forms of collaboration.

Centre for social innovations

Cross-border collaboration also gave rise to another idea that was not originally planned – the ‘Experyment’ Science Centre. This was set up in 2006-2007 within the framework of two INTERREG projects, BaltINNO and creActive NET, both creating networks to promote active cross-border education in Gdynia and Klaipeda in Lithuania. The park manager wanted to fill the unused spaces of the renovated buildings, and so dedicated 500 square metres for use as a centre for scientific experimentation by children and young people. It is equipped with a unique collection of equipment that helps young people to understand environmental issues, technologies and physics. The idea turned out to be a hit of regional importance – this was the first centre of this kind in Poland. Schools are prominent among the long lists of visitors. The success was so great that finally the municipality decided to separate the centre from the organisational structure of the park. However, even with a separate management structure the centre will remain in the park – and will be significantly expanded. Today it is a symbol of how the park has introduced actions focused on the youngest citizens, in order to influence their attitudes to knowledge and science. Even some initiators of the new science and technology parks across the country consider that this solution from Gdynia is the pattern for this kind of institution. The reality is that this was one of these unexpected successes which come about only through open innovation and unleashing creativity.

Gdynia has also been implementing innovations in the social sphere. Here again, it has developed solutions that can serve as national examples. Other municipalities have often benefited from Gdynia’s experience in welfare, health care, education, business policies and policies for the disabled. Although the success of the Pomeranian Science and Technology Park was originally built on technological innovations, Deputy Mayor Michał Guć, who is responsible for the city’s development policy, underlines that this is a good time to consolidate and systematise the support for social innovations which they have given over the last two decades. ‘For this reason, we are busy developing a new module in the park to create an incubator for social innovations. This means that the various projects in the area will be concentrated in one place, initiated and implemented in conjunction with other bodies, companies and communities’.

So social innovators are starting to find their own space in the Pomeranian Science and Technology Park, alongside IT specialists, biotechnologists and designers. Gdynia promotes



Fig. 4. Model of the park’s new buildings (PPNT archive)

and develops innovative ideas that contribute to the public good, particularly using new technologies in the social sphere. They can mediate social conflicts in poorer districts or be applied while working with the homeless or disabled. They can strengthen citizens' involvement and empowerment, and make the most of human diversity, creativity, social inclusion and equality. These ideas can include action models as well as new products and services. These social innovations include strategies and problem-solving methods based on completely new tools. Social innovations can be developed by private individuals, groups and communities, third-sector organisations, companies and public institutions.

An example is tackling the problems of disadvantaged neighbourhoods. Over five years the social welfare office has coordinated an integrated approach to revitalising housing blocks and the external environment in Zamenhofa Street. This work is now being coordinated

through the Technology Centre and the city is participating in the URBACT Smart Cities project which focuses on citizen-led social innovation.

Social innovations are of great interest to many institutions, so Gdynia has the added advantage of working with international experts in this area. An interesting exchange of experiences brought 80 social innovators to Gdynia for the first meeting of the global community promoting social innovations in Poland, the Social Innovation EXchange (SIX) Winter School 2011. Of the other social innovation events held at the park over recent months, the independent TEDxGdynia conference on 'ideas worth propagating' and the 'Family as a Starting Point' conference are both worth mentioning.

Growing the technology park

The constantly developing programme for the technology park demands new floor space. This has informed discussions about the fate of the second part of the shed, the part dedicated to trolleybuses. The shed's functions were transferred to a new facility on the city's outskirts, releasing an area of about six hectares. New buildings have started to be constructed on this site, cofinanced from the Pomeranian regional operational programme and the national operational programme for Innovative Economy. The total cost of the new project is €50 million, of which €35 million is from the ERDF, with the remaining costs being covered by the municipality. As a result, the number of firms will increase by 300. They will be able to set up their offices in this modern office and laboratory complex, and access professional business and technological consultancy services. The opening of the Creative Entrepreneurship Centre will be the final stage of the project. The new complex will also include the expansion of the Experiment Science Centre to 3 500 square metres, the Gdynia Design Centre, a pre-incubator and incubator of innovation and entrepreneurship, the Implementation and Education Centre for Advanced Technologies, as well as the Regional Patent Information Centre.

The upshot of all this is that the park will soon have six times as much floor space available to innovative firms. The semi-circular glass buildings at the park gateway have encouraged private investors to develop this part of the city, as well as to offer new office spaces in the neighbourhood. Not all businesses are purely innovative, but in these cases they have to leave the park when they have become established. The space around the park has already gained a reputation which attracts businesses. The nearby railway station adds to the attraction, and indeed is to be renamed 'Gdynia Technology Park'. As the park develops the whole district is changing with it, and office spaces have been created on the other side of the railway tracks. To connect these new investments with the park, the municipality has built a new footbridge.

The list of applicants for the new offices is already full, though applications are still open. The process is managed by Gdynia Innovation Centre which employs about 70 persons, of which only three work in the administration unit. The Gdynia authorities are prepared to cover the administrative costs of the park for the years to come. Up to now, they have been spending about €600 000 annually. The direct output of the park is that more than 500 persons are employed in firms operating there. But the advantages flowing from the innovative ideas seem to be considerably greater.

Facing the future

Anna Borkowska, director of Gdynia Innovation Centre, considers that the main achievement of the park is the success of its firms. There are many examples, but she usually quotes the story of the firm which was a direct result of the innovative operations undertaken by Gdynia municipality. The IVONA Software Company has been involved in creating precise, natural voices reflecting the cultural specificity of each and every country and region since it won the 'Gdynia Business Plan' contest, and was rewarded with an office in the park. Currently, its speech synthesis system has the world's fastest developing portfolio with solutions available for telecommunications, mobile device producers, as well as creators of applications and

technologies to assist disabled people. IVONA's Bright Voice technology is acknowledged as the most accurate product in its category in the world.

The city's initiative has changed the attitudes of inhabitants. These activities demanded organisational changes in the municipality itself, which led to greater effectiveness. The Gdynia Innovation Centre became a vehicle enabling the inflow of external resources for the benefit of the local economy. But also, as was previously the case with the port, it has helped to develop the international position of the city, making it a participant in an extensive global network.

In 2003 the Pomeranian Science and Technology Park joined the International Association of Science Parks (IASP). The organisation currently comprises 375 parks in 70 countries that together host more than 200 000 companies worldwide. It has been operating for over 27 years and aims to make companies, cities and regions more competitive through innovation.

The municipality has transformed other districts, especially those near the city centre. However it felt that spatial development and infrastructure improvements were not enough to keep the young people in the town. The vision was that in new buildings there should be vibrancy – social, cultural and economic. Michał Guć, Deputy Mayor of Gdynia responsible for development policy, is convinced that citizens are the city's most important natural resource. Based on this idea, the pioneering municipality has initiated and developed an innovative programme of cooperation with NGOs and civil society. This solution, referred to as the 'Gdynia model', has become a model for many Polish cities. Finally it has become the legal rule for the communities, adopted by parliament.

The Pomeranian Science and Technology Park has given the city new direction. It is in hard times that modern entrepreneurship takes shape and new employment opportunities are created. The park is where people get together and – because they are creative – come up with ways to solve their problems. A lot of people want to base their businesses in the park. The new buildings are the source of many new ideas, which have every chance of becoming popular commercial products. This augurs well for the city and the region. It is worthwhile to be innovative.

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