PULS
PRZEDSIĘBIORCZOŚCI

KIELCE
TECHNOLOGY PARK

CK

CENTRALAB EDITION
www.centralivinglab.eu

LIVING LABS

SMART CITIES

SMART CITIES IN POLAND

SANTANDER – A CITY WITH A HIGH IQ

LIVING LABS IN KTP

A PARK OPEN TO COOPERATION

CentraLab
Central European Living Lab
for Territorial Innovation

I t seems that less than two years of the technology park's business is too short a period in which to seriously consider making it international. Over the past few months we have formulated development plans and considered which road to take and what business model to apply. This may not seem smart, but as someone who has seen many similar initiatives around the world, I can boldly say that an institution can be protected against the most complex global problems only if it becomes international. At the same time I realize that if we do only the things that have proved themselves in the past, we will reach a situation where we feel that everyone else has overtaken us. That is why we have created a unique new strategy, laying down ambitious targets involving an expansion of the infrastructure, a greater focus on the park's educational aspects, and internationalization. Of enormous importance to us is the fact that the strategy has earned recognition from the owners and the European Commission.

The Kielce Technology Park will receive a major financial injection, thanks to which it will embark upon the road to dynamic development, becoming one of the largest and fastest-developing technology parks in Poland. Its enormous development potential will be fully exploited by the City of Kielce. A modern business district will emerge on Olszewskiego street, attracting know-how and capital and creating new possibilities. You can read more about our plans, projects and international cooperation in this current issue of Puls Przedsiębiorczości.

Szymon Mazurkiewicz,
Director, Kielce Technology Park

04

INTERVIEW WITH

FRANCESCO MOLINARI

FRANCESCO MOLINARI IS A SCIENTIST AND HAS TAKEN PART IN MANY ICT
PROJECTS FUNDED BY, AMONG OTHERS, THE EUROPEAN COMMISSION.
HE IS AN EXPERT IN THE CENTRALAB PROJECT.

EACH OF US IS PART
OF A LIVING LABORATORY

THE KIELCE TECHNOLOGY PARK HAS ENGAGED ITSELF IN THE INTERNATIONAL CENTRALAB PROJECT IN WHICH THE METHOD OF LIVING LABORATORIES IS BEING APPLIED. WHY IS IT WORTH APPLYING IT AND WHAT WILL IT BRING TO ORDINARY CITIZENS? FRANCESCO MOLINARI, SCIENTIST AND AN EXPERT IN THIS FIELD, REPLIES.

What are Living Labs?

Loosely speaking, they are „ad hoc" communities of people belonging to different stakeholder groups of the so-called „Quadruple Helix" (Academia, Government, Industry and Civil Society) that occasionally or permanently gather to perform user driven innovation projects in a variety of thematic domains (ICT, but also energy, education, cultural heritage, etc.).

What the residents of the city, where the Living Lab will be create could gain?

Well, in some cases, people belonging to a Living Lab get small prizes or rewards for their active participation in projects. This apart, if the Living Lab has to do with innovation in city services, there will obviously be gains for the residents in seeing urban facilities and therefore community life adapted and improved according to their respective wishes and wills.

Is the creation of a living lab difficult? Where to find support for the ideas connected with this type of project?

In my experience, the difficult part is not to create but to maintain a Living Lab, to make it consolidate and grow up. Ideally, financial support should come from the (private or public) service providers or industrial manufacturers that are most interested or get the most value out of the user driven innovation projects that the Living Lab puts in place in real life environments.

Are the living labs are able to help in solving the most pressing needs of our planet – for example: slow down or even stop global warming, reduce poverty in developing countries? Or are these projects more local?

As you know, „local" and „global" are just two sides of a same coin. Ideally, small solutions to big problems should be more easily identified by a bottom up approach and then analyzed in their potential for scaling up at broader societal level. This approach could well outperform the current top-down vision that has often proven unable to solve major issues and challenges by sending recipes and recommendations around, which remain hard to implement without a strong commitment and a serious engagement from the people in charge (us citizens, indeed).

As one of the most interesting examples of a living laboratory is the Spanish city of Santander. Why?

Well, actually the city of Santander has only recently started a Living Lab experience. What is really interesting is that they have successfully deployed a huge number of sensors and other IoT (Internet of Things) devices in several locations within the city, and when they started to think about the kind of innovative public services that this infrastructure could enable, they have come to the conclusion that only by involving the citizens could these services be conceived, designed and implemented in an efficient and effective way.

Network cameras on the streets, motion sensors tracking people. Is it worth to get rid of privacy for greater convenience and safety?

Absolutely not - in this sense, I see privacy as an individual right like freedom of speech or movement. However, the dilemma is not between privacy and convenience (or safety) in my opinion, as modern technology allows us many possible combinations and reconciliations of these aspects. The question is: why shouldn't we (as citizens, or users) be asked upfront about the extent to which we (individually, not collectively) are available to loosen privacy protection rights in exchange for another benefit or value coming to us directly - not to any other party with commercial or institutional interest in this domain? It's a kind of rhetoric question of course, but when the Living Lab logic applies, many of these „unusual" perspectives emerge that contribute to finding original solutions to tricky issues.

Kielce Technology Park creates an integrated IT resource management system, that will help entrepreneurs.

Is knowledge and new IT solutions generated in this project can also be used in other areas of our life?

Technology can do everything, only man can say where we should stop or continue to work. Ad a personal advice, why don't you ask your entrepreneurs - who are also citizens, husbands, wives, fathers, etc. - about the best usage they would make of your IT facilities in other sectors of their daily life?

Do you believe that in the future Living Labs will be common? How long will we wait for it?

Living Labs as such may die, but the concept of user driven, open innovation in real life environments is here to stay. Like the seeds that generate new plants, it will only be a question of time and someone (not necessarily us) will see the benefits of this concept in many more cases and places around.

Santander
– a city with a high IQ

SANTANDER IN SPAIN IS A SMART CITY WITH A CAPITAL S. FIRSTLY BECAUSE IT EVEN HAS SMART STREETLIGHTS THAT REACT TO MOOONLIGHT, AND SECONDLY BECAUSE IT HAS A MAYOR WHO LOVES TECHNOLOGICAL NOVELTIES AND CONSTANTLY INTRODUCES THEM TO MANAGEMENT OVER THE CITY. AS IF THIS WERE NOT ENOUGH, SANTANDER LIES ON THE ATLANTIC, HAS BEAUTIFUL BEACHES, A COMMERCIAL AND PASSENGER PORT, AIRPORT AND TWO UNIVERSITIES. THIS WAS ONCE THE FAVOURITE RESORT OF THE KINGS OF SPAIN, BUT TODAY THE CITY DRAWS REPRESENTATIVES OF WORLD ENTERPRISES SUCH AS IBM, GOOGLE AND MICROSOFT. AND NO WONDER, BECAUSE SANTANDER IS ONE BIG LIVING LABORATORY.

Central European Living Lab for Territorial Innovation

08

hanks to the efforts of scientists from the local University of Cantabria, the city has become the axis of the European Smart Santander project.
- "The project was launched in September 2010 and had a dual purpose – to introduce to the net a huge quantity of data that would enable scientists and entrepreneurs to experiment on a living urban organism, and at the same to apply their findings to the provision of municipal services," says Prof. Luis Muñoz of the University of Cantabria, a specialist in IT in charge of the entire operation.

So that this could happen, Santander was fitted with thousands of sensors which basically measure everything that can be measured. The sensors were packed in waterproof boxes and hidden beneath the asphalt, but also fitted to the walls of buildings, street lamps and city buses. They are even going to be hidden inside waste bins.

THEY ARE SUPPOSED TO SUPPLY THE UNIVERSITY LABORATORY WITH A HUGE AMOUNT OF DATA, STARTING WITH WEATHER CONDITIONS, VIA THE AMOUNT OF OZONE IN THE AIR, NOISE LEVELS AND THE AMOUNT OF VEHICLE AND PEDESTRIAN TRAFFIC, ALL THE WAY TO FREE PARKING SPACES, SPENT LIGHT BULBS IN STREET LIGHTS AND FULL WASTE CONTAINERS.

Why all this? So that the traffic lights work in a way that will clear traffic jams, so that drivers can check where there are free parking spaces on an interactive city map in their smartphones. So that waste collection vehicles do not cruise around the city but only go where the waste containers are full. Last but not least, so that the city's lawns are sprinkled when the air humidity falls to a certain level. And also so that the street lighting goes on when dusk actually falls.
- "Since February 2011 we have installed over 12,000 sensors, right now we are fitting the final ones under the project, but not the final ones altogether. The city will gradually introduce this technology to other municipal services in order to improve those as well," says Prof. Luis Muñoz.

The scientists in Santander have managed to squeeze almost 9 million euros for the project mainly out of EU funds. But the future benefits are inestimable. The benefits are not just lower costs of, for instance, waste disposal, street lighting and water consumption, but also a reduction in car fumes because drivers will no longer have to circulate the city in search of a space to park. And that is how a model smart city is meant to work. Santander has one more trump card – an atmosphere inside city hall that encourages new technologies. All this thanks to its 42 year-old mayor, Iñigo de la Serna, a lover of technological novelties. He is constantly equipping the city's inhabitants with smart tools meant to make life easier.
- "You no longer have to look for a parking meter and carry small change, and you can extend your parking time limit without having to return to your car," Mayor de la Serna announced on his Facebook profile in the middle of August. This was following the launch of an app called 'e-park', available for all smartphones. It had been previously tested by the inhabitants of Santiago de Compostela and Málaga, but the novelty and absolute hit with the Santander version is that parking time can be shared with other motorists. Any unused minutes can be stored in a so-called internet cloud from where other motorists can download them. The system also

SMART CITY PROJECT
SANTANDER, SPAIN

10 000 SENSORS
fitted to the walls of buildings, lamps, road signs and pavements measure lighting, noise levels, traffic congestion and traffic jams.

TAXIS, BUSES AND POLICE CARS
continuously record their location and transmit data on their surroundings.

THE MUNICPAL CLEANING SERVICES
collect waste only from the collection points where this is required.

SMARTPHONE USERS
use special apps to report, for instance, road damage. The same software makes it easier for tourists to move around the city.

GARDENS AND PARKS
use this technology to regulate lighting and water and energy consumption.

SERVERS
collect and process data which forms an overall picture of the city.

PROBLEMS
are automatically routed to the relevant units.

---

makes sure its users do not have to pay fines for parking without paying. Ten minutes before the time is up, an alarm sounds in their mobile phone. With the aid of the app, they can then extend the parking period. A motorist's smartphone also alerts him if the balance on his e-park account falls below 5 euros. That is the minimum amount which must be charged to the account when one registers in the system.

Apps for smartphones are generally a speciality of Santander. All that is needed is a smartphone, which can then be aimed at, for example, a bus stop to find out when the next bus will arrive, or where a bicycle can be hired, or what the building ahead is and who built it. This app will also tell what concerts or sports matches are currently taking place nearby. One can even view the current discounts in a supermarket.

A NOVEL IDEA BY MAYOR DE LA SERNA IS THE SANTANDER CITY BRAIN, AN INTERNET PLATFORM OF IDEAS WHERE RESIDENTS CAN SUGGEST SOLUTIONS TO MAKE THE CITY'S FUNCTIONING EASIER FOR THEM.

It is not just a potential source of inspiration for officials. The best ideas are awarded by being implemented. At present, three ideas are being prepared for implementation. They were the winning ideas in a contest in July. The first is a project employing augmented reality technology, which will help blind people move around the city. The second is an application with which residents will be able to check where city waste disposal vehicles are currently located. - "I cannot stand it when I'm driving my car in a hurry and I suddenly encounter a waste disposal vehicle. There are streets which you can turn around in, but in many cases confused drivers wait until the waste has been collected," argued the project's author, Rocío Muñoz. The two remaining best ideas are also hers.

She proposed that the city develop a system that would maintain 'waste' statistics: How much of each type of waste residents throw away, and how much of it is recycled. A virtual map would show recycling points, among other things.

The third winning idea is a website or smartphone app containing information on beaches in Santander: The point is to have the latest information on whether there are lifeguards on duty and whether one can swim. The app would show the colour of warning flags, the height of waves,

---

and which beaches are best for children. It would also show the location of nudist beaches, show whether there is a bar of cafe close by, and tell us which bus to take to get there.

The City Brain platform was launched on 8 March, and residents submitted over 700 ideas during a six-month period alone. The City Brain has one more task – officials post their own ideas on it for approval.

- "The City Brain has proved to be a powerful tool for generating ideas, and Santander has become the first city to promote transparent management and encourage citizens to take part in shaping the city's future," says Mayor de la Serna in interviews. The participation of citizens in management can also be clearly seen in another Santander project – El Pulso de la Ciudad.

THIS IS AN APPLICATION AVAIALBLE FOR SMARTPHONES AND TABLETS WHICH SERVES AS A COMMUNICATIONS CHANNEL BETWEEN RESIDENTS AND THEIR NEIGHBOURS AND THE CITY ADMINISTRATION.

With this app, each user can send a photo or message to warn others that somewhere on the pavement there is an uprooted tree, or a hole in the road, or waste that has not been cleared, or a burst pipe, or ugly graffiti with which vandals have spoiled the wall of a building. Each such warning is at the same time a signal for intervention, and all warnings not only reach the appropriate services, but also the officials who monitor their work. The person who issued the warning remains anonymous, but everyone can observe how long it takes to resolve the issue. When the city authorities reviewed the functioning of the 'El Pulso' system in the summer, it already had 5,700 registered users. They had reported 1,006 various matters, of which 918 were successfully resolved. What is interesting is that the local daily El Diario Montañés is also connected to the system so that journalists can see how fast the authorities react to actions by citizens.

And what do the residents of Santander say? Is life in a smart city really better? - "Smart city solutions have certainly helped us in several matters," admits Rocío Muñoz, computer engineer and winner of the Santander City Brain competition. And she provides examples from her own life:

- "To get to work, each morning I have to take a bus which runs every 20 minutes.

If I miss it, I am late. It is important that I get to the bus stop in time. So on my smartphone I've installed 'Tus Santander' app which shows me at any time where my bus is and in how many minutes it will reach the bus stop. Another useful thing is the 'e-park' system, thanks to which I can pay for parking my car from anywhere in the city. That really is useful," Rocío Muñoz stresses. She also praises the 'El Pulso de la Ciudad' application.

- "You can find out from it all the things that do not work at a given moment, and the persons responsible can quickly solve the problem. These are just three small examples, but thanks to them my life has certainly become easier," she explains.

Though she admits that some residents of Santander criticize the smart city solutions. Many people do not understand why the city should spend money on technologies. They think it should be sent on more important things.

THESE ARE MAINLY OLDER PEOPLE WHO HAVE NO COMPUTER OR SMARTPHONE, SO ONE CAN UNDERSTAND THEM TO SOME EXTENT. YOUNG PEOPLE DEFINITELY SUPPORT CITY HALL'S ACTIVITIES.

"They have smartphones, like new technologies and use all the applications just as I do. That is how they know the real benefits it brings to their lives," Rocío Muñoz stresses.

How does smart Santander function against the background of other Spanish cities hit by the crisis?

- "We are a small city (180,000 inhabitants), with the same economic problems as other places in Spain. The main source of income is tourism. The city is full of tourists in summer. Of course there are many more things once improve in Santander, but thanks to smart city we are proceeding in the right direction and the city is developing. A lot is being said about us in other countries now, and this presents an opportunity to attract investors and create new jobs," says Rocio Muñoz.

And this scenario is already being fulfilled. Several investors from the IT sector have become interested in the city, and the Spanish concern Ferrovial, which has shares in London's Heathrow Airport, among other places, has already decided to invest here. Ferrovial is going to build its research centre in Santander.
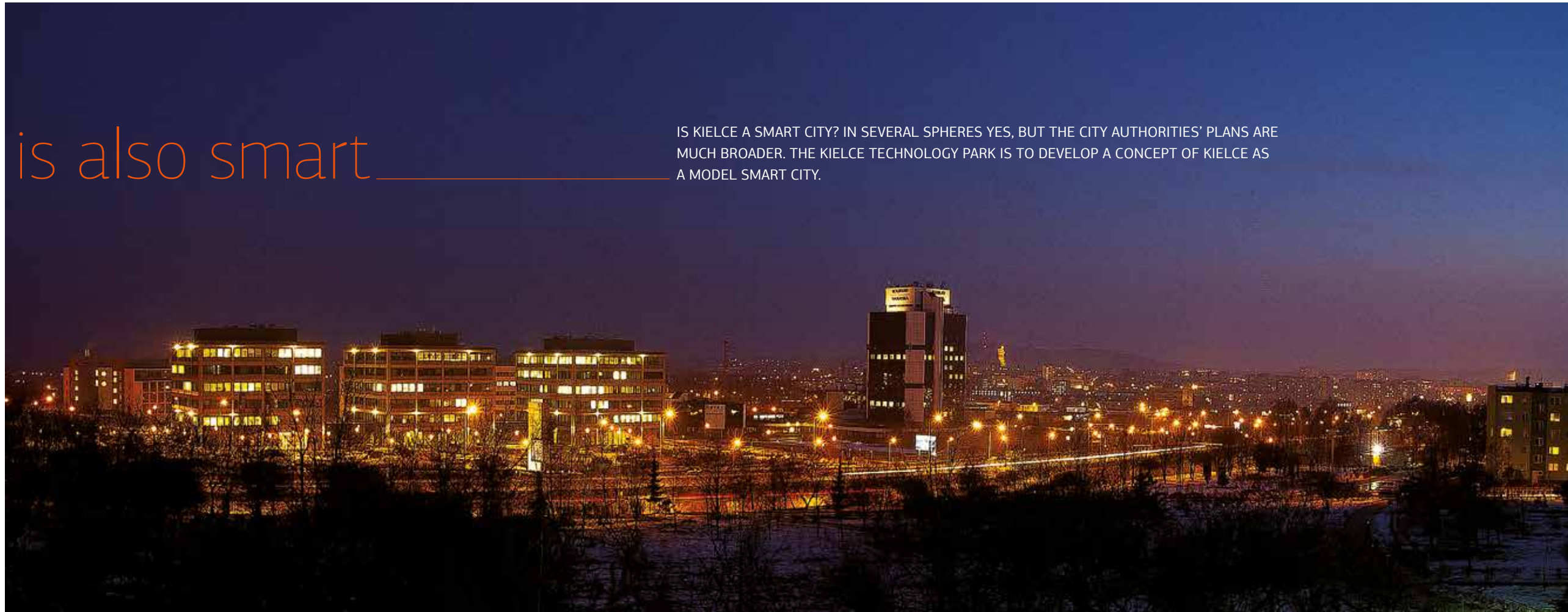

Each year, awards are granted to smart cities all over the world.

This year, 22 cities received awards in various categories. They include: **London** for reducing energy consumption and greenhouse gas emissions, and **San Francisco** for a hurricane early warning system.

Kielce is also smart

IS KIELCE A SMART CITY? IN SEVERAL SPHERES YES, BUT THE CITY AUTHORITIES' PLANS ARE MUCH BROADER. THE KIELCE TECHNOLOGY PARK IS TO DEVELOP A CONCEPT OF KIELCE AS A MODEL SMART CITY.

The idea of a smart city, in other words a city that is vibrant and friendly, involves most of all the introduction of the kind of activities and solutions, based on new technologies, which will enable residents to live better and easier. Is Kielce such a city? Yes, it already is in several spheres.

- "KIELCE IS SMART, THOUGH A LOT OF PEOPLE DO NOT REALIZE THIS. A PRIME EXAMPLE IS MUNICIPAL TRANSPORTATION AND THE ENTIRE SYSTEM OF PASSENGER INFORMATION," SAYS SZYMON MAZURKIEWICZ, DIRECTOR OF THE KIELCE TECHNOLOGY PARK.

We are talking about the system of, among other things, electronic boards at bus stops installed in the middle of 2011, showing the actual times when buses will arrive. Where there are no such boards, passengers can find out when their bus will arrive by sending a text message with the bus stop's code number. An Android smartphone application has also been available since January. It shows where we are on a map and lists the nearest bus stops and the departure times of buses. There are bound to be many more examples like these in the coming years. It is the ambition of Kielce's authorities to introduce successive smart solutions to the city, and the Kielce Technology Park is meant to coordinate actions. Work on preparing the concept of Kielce as a smart city will start this year.

- "It is an excellent idea, provided that it is implemented wisely. But I am calm in the knowledge that our Technology Park will handle this. Today, the Kielce Technology Park is in the world lead because, among other things, its creators travelled around the world to see how the best institutions of this kind are functioning and used the experience of others. This is the right method, so I think it is worth proceeding along this path regarding smart solutions. We might not be a second Santander right away, but the road is clearly defined. Especially because we have Mayor Wojciech

Lubawski who is very open to a modern approach to the city," stresses Tadeusz Sayor, deputy mayor of Kielce. The first basic step must be to define the city's current needs, he adds.

- The Kielce Technology Park is already planning meetings on this subject. Not until we have identified needs will we consider how to solve specific problems and which partners to choose, explains Dominik Kraska, Head of the Kielce Technology Park Consultancy and Technology Transfer Department.

We already have the first ideas. They include the creation of a system reporting current traffic obstacles on the main roads in Kielce. Motorists would receive text messages on this subject, or the information might appear on electronic boards installed around the city.

- "To this once could add a system showing free parking spaces in the city centre, so that a motorist 2 km from the centre will know that there is no point driving there," explains Kraska.

Municipal transportation remains a clear field for the authors of smart solutions. A system of green waves for city buses, combined with the creation of additional bus lanes, is being considered.

BUS DRIVERS APPROACHING A JUNCTION WOULD SEND A SIGNAL TO THE CONTROL CENTRE, WHICH WOULD THEN GIVE THEM THE GREEN LIGHT. "THIS WOULD MAKE CITY TRANSPORT THE FASTEST MEANS OF TRANSPORT IN THE CITY," SAYS KRASKA.
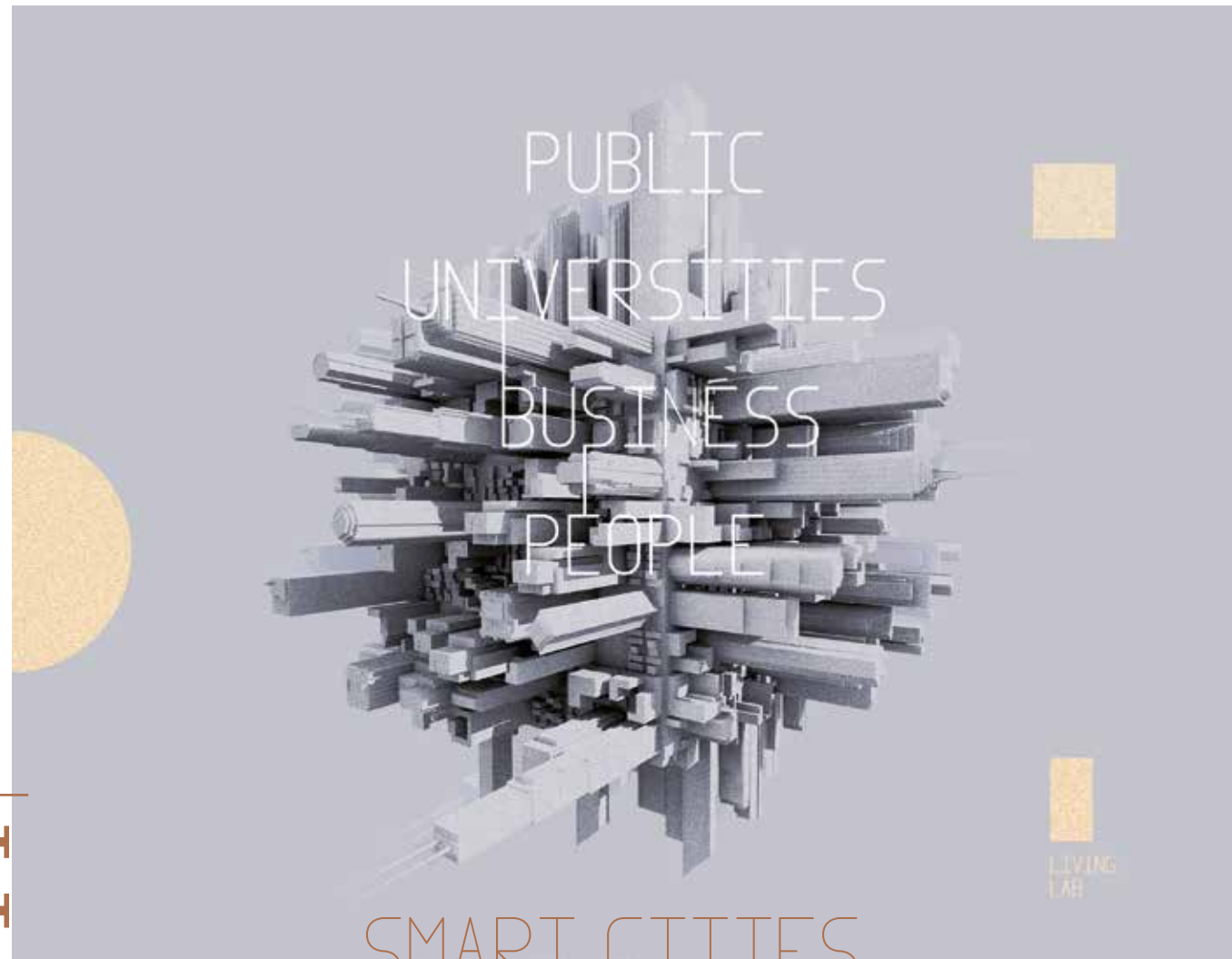
Municipal surveillance certainly offers unlimited possibilities. In the summer, a company presented in City Hall the advantages of a system of smart cameras. Man is fallible – one person cannot watch images from two cameras for more than 30 minutes, let alone from several dozen cameras. Therefore they might not always react properly. But there are technologies which process the images supplied by cameras and detect any dangers. How?

- "If, for instance, they pick up information that over 20 cars are moving at less than 15 km/h on IX Wieków Kielc street, a warning message about this is automatically generated. The controller can then check right away what has happened and take the appropriate actions," says Kraska. Generally, Kielce has a lot to choose from, because when one looks at examples of other Polish or European cities, there is a multitude of smart solutions. But can the capital of Świętokrzyskie Voivodeship afford to be a model friendly city?

- "This involves a huge amount of money, tens of millions of zloty. Therefore we will certainly apply for EU funds. There is no turning back from a smart city. A failure to invest in technologies means that the city will be left behind, its development will falter and the population's lives will be worse," stresses Dominik Kraska.

PUBLIC
|
UNIVERSITIES
|
BUSINESS
|
PEOPLE

LIVING
LAB

SMART CITIES
IN POLAND

INFORMATION ON BLOCKED STREETS IS UPDATED CONTINUOUSLY, YOU CAN SETTLE MOST MATTERS WITH ANY AUTHORITY VIA THE INTERNET. YOU DO NOT HAVE TO DRIVE, CITY TRANSPORTATION WILL QUICKLY TAKE YOU WHEREVER YOU WANT. SCI-FI? NO, THAT IS WHAT LIFE IS LIKE IN A SMART CITY. ARE THERE SUCH CITIES IN POLAND?

First one has to answer the question: What exactly is a smart city? There are various definitions, but they have a common denominator – a smart city is one where thanks to innovative technologies (especially telecom technologies), life is more convenient.
- "We cannot view a smart city solely in terms of technology. Of course this aspect is very important, but one cannot ignore the human factor," says Professor Andrzej Sobczak*, author of the inteligentnemiasta.pl

blog. "For me, a smart city is one that invests in its residents, at the same time encouraging them to assume greater responsibility for public spaces. These new technologies make it easier to settle many things, for instance in offices. On the other hand there is no question of creating a smart city without the development of education and public transport. The idea of a smart city itself derives from large cities which possess dynamic scientific centres. There are relatively few such cities in Poland. But even a city of several tens of thou-

Gdańsk

A team of experts from IBM Poland, together with the Municipal Office of Gdańsk, has formulated recommendations for solutions that will encourage the city's development, improve the quality of communal services and increase the social commitment of the inhabitants. During workshops, the consultants from IBM considered the affairs of the city and conurbation, investigating social, cultural and infrastructural problems.

sands of people can implement solutions that bear the hallmark of a smart city," Prof. Sobczak adds.
The professor does not think places with less than 40,000 people will be able to afford to introduce smart city solutions. There is no hiding the fact that the technological solutions needed to improve urban management are very expensive. It is also useful to have good higher educational establishments in the vicinity, but these are usually absent from smaller cities in Poland. For whom is this worthwhile?
The answer is simple. It brings benefits to everyone – residents and the authorities. Despite the high initial costs, considerable savings occur in the long term. How is this possible? For example: A knowledge of night-time traffic intensity on specific streets will help reduce electricity costs and provide less electricity to areas where no one is around at a given time. Knowing which street has the least traffic jams, motorists will quickly reach their destination and save a lot of fuel in the process. There are more examples like this.
- "A properly managed smart city is also a magnet for entrepreneurs, and consequently new jobs. Businessmen will be attracted by technological solutions which

make it easier for them to settle official business, but they will also like the better educational facilities for the children of their employees. And the quality of education translates into employees with better qualifications," explains Prof. Andrzej Sobczak.
In Poland the is still no smart city in the proper meaning of the term. There are cities that have started to implement technological solutions and have put greater pressure on education. Gdańsk is the leader, but we will also find the characteristics of smart cities in Warszawa, Wrocław and the Silesian conurbation.
- "I divide cities into several categories. The first category I describe as unenlightened cities. The decision-makers there are not interested in smart city solutions. Unfortunately, most cities in Poland are like that The second category comprises cities whose authorities have future plans to create a smart city. The final, rarest category comprises those cities that have already started to do something in this direction," explains Prof. Sobczak.

* Prof. dr. hab. Andrzej Sobczak is head of the IT Systems Unit of the Faculty of Economic Information Technology at the Warsaw School of Economics. He is also director of the Centre of Studies on a Digital State.

Kielce

In 2012, Kielce found itself among the finalists in the Smart City Expo world congress in Barcelona. The city presented its GIS system, comprising: the www.gis.kielce.eu geoportal, one of the system management tools dedicated to Kielce's sustained development. Over 160 presentations from all over the world were made during the contest. Altogether, in three categories: 'Project', 'City' and 'Innovative Initiative' – 18 finalists were chosen.

LIVING LABS
IN KTP

16

THE BUSINESS PLAN APPLICATION FOR THOSE CONSIDERING GOING INTO BUSINESS AND A SPECIAL PLATFORM ALLOWING A CORRELATION OF BUSINESS PARTNERS. ON SPECIAL REQUEST FROM INTERESTED PARTIES, THE KIELCE TECHNOLOGY PARK HAS PLACED A RANGE OF DIGITAL TOOLS ON ITS WEBSITE.

All this is part of the international CentraLab project, being realized by partners from eight European countries, including: Slovenia, Germany, the Czech Republic and Italy. Their task is to implement a pilot programme connected with innovations from various sectors, including: health, environmental protection, ecotourism and IT. The common denominator is activity on the basis of the Living Lab idea. - "Each activity is focused on people and their needs. They know best what products thy need, what they think needs to be improved, what needs to be changed, and what should be abandoned altogether," explains Szymon Mazurkiewicz, director of the Kielce Technology Park.

A platform of three spheres

The task of the Kielce Technology Park is to create and implement an IT system that will not only improve management over the Kielce Technology Park's know-how and resources, but will also help establish the Park's relationships with lessees and between companies themselves. - "We arranged a series of meetings with businessmen, representatives of higher educational establishments and city authorities. During talks lasting many hours we worked on improvements that will provide firms with support in promotion and in gaining clients," says Joanna Rudawska, in charge of the Polish part of the CentraLab project.
And the result? An IT platform with a range

of convenient functions allowing one to exchange information, order services and promote one's firm. - "The whole platform is adapted to three groups of clients: Those who are only just thinking of starting their own business, tenants of the Kielce Technology Park, and external firms," says Rudawska.
"All the features will be made available to users by the end of this year. They might also be used by other partners of the project."

Electronic planning

Those who are seriously considering starting up their own firm but who do not quite know whether and how to do so can use a special 'Biznesplan' application

- "IT IS NOT EASY TO WRITE A GOOD BUSINESS PLAN. WE OFTEN ALSO WONDER WHETHER OUR IDEA HAS A CHANCE TO SUCCEED. THIS APPLICATION NOT ONLY TAKES THE USER THROUGH THE QUITE COMPLICATED PROCEDURES STEP BY STEP, BUT ALSO, THANKS TO VARIOUS CALCULATIONS AND COMMENTS, ALLOWS HIM TO CONSIDER HIS IDEA AND ESTABLISH ITS STRONG AND WEAK POINTS," SAYS SZYMON MAZURKIEWICZ.

The form designed by experts allows the user to create a professional plan, together with a calculation of all essential specifications, and then to save and print out the result. The user may take a break from his work and resume it at any time. - "That is a valuable thing. I remember when I created a business plan myself. It was not easy. Besides, this application will be useful not only to people who want to o start their own firm, but also to those who are already on the market. A business plan is often required when preparing projects or applying for financial support," says Marcin Januchta from the Partners Creative Studio. The next step on the road to one's own firm is to choose its location and calculate the costs of renting suitable premises.
- "Persons interested in cooperation with

18

the Park, as well as those already engaged in business, can use the electronic calculator to calculate the cost of renting space at the Incubator or Technology Centre, together with all the preferences they are entitled to," urges Joanna Rudawska.

Among us tenants

Tenants and employees of the Kielce Technology Park can also count on a series of improvements. The first of these is the intranet. Users can access a notice board with offers from various institutions an information on who is looking after a given entrepreneur. - "The more firms there are in the Park, the more difficult effective communication is. Thanks to the intranet, w no longer have to knock on different doors to ask for help or advice. We just make an entry on the notice board, and get an immediate reaction," says Arkadiusz Kozieł from Mansourcing.

That is not all. Thanks to a special link, tenants and outside firms can book a conference room and a room for business meetings electronically. In turn, employees of the Park can access a database on tenants who are using the services of Kielce Technology Park, according to their business segments and how long they have been in business.

Search for firms

Mobile 'infokiosks' will be provided to promote Kielce Technology Park tenants better, and also to provide outside firms with more information about them. These 'infokiosks' will be taken to various kinds of trade fairs.
- "With them, one can enter the Kielce Technology Park website and view 3D projections of the Incubator and Technology Centre buildings and investment sites. One can also view individual floors of buildings with occupied and rented premises clearly marked," says Joanna Rudawska.

AN EXCEEDINGLY USEFUL TOOL WILL NO DOUBT BE THE PARTNER SEARCH PLATFORM, ALLOWING A SEARCH FOR PARTNERS INTERESTED IN COOPERATION. AFTER LOGGING IN, THE USER SEES A HOME PAGE WITH INFORMATION ON COMING EVENTS.

Every entrepreneur can place his own profile on the platform, with basic details about himself, a photograph, and information on what kind of partners he is seeking. That make things much easier for entrepreneurs.
- "The possibility of posting one's own profile and access a database on partners is fantastic. It can save time and money. It costs money to use or create such databases. If the application is available not only to firms located in the Park, but also to entrepreneurs in the region, in Poland or even abroad, it will make things incredibly easier. I attach a lot of hope to this application," Marcin Januchta confesses.

A mobile version of the Kielce Technology Park website, accessible from all devices, has also appeared thanks to the CentraLab project. It is adapted to people with poor eyesight. We invite you to take a look at www.technopark.kielce.pl

The 'Biznesplan' application has been tested by people who wish to set up their own firm. The first comments are very favourable.

A dynamic development path

THE KIELCE TECHNOLOGY PARK IS GOING TO INVEST THE CONSIDERABLE SUM OF 91 MILLION ZLOTY ON FURTHER GROWTH. THE LIST OF NEW PROJECTS INCLUDES: THE CONSTRUCTION OF AN IT INCUBATOR, PRODUCTION HALLS, RAPID PROTOTYPING CENTRE AND FASHION DESIGN COMPETENCE CENTRE.

Wojciech Lubawski, Mayor of Kielce

The Kielce Technology Park has been hailed by a representative of the European Commission, making it a model for other technology parks in Europe. In the race for extra funds, we also beat other parks in Poland, competing against fifteen strong candidates. Someone has appreciated our efforts, confident that the new premises will not only find tenants but will also be filled with substance. This is the first major step showing that we are in the game, and is also a taste of the new financial perspective in which much greater funds will be available. The Park is faced with further challenges, including an internationalization of the entire venture. We want to take part in building a park in Hungary, the city of Winnica is interested in our support, and we are considering establishing contacts with Russia. We are facing a great opportunity which we must exploit. The world's biggest technology park in Beijing, gathering 20,000 companies and with a budget of USD 500 million, is seeking a partner from Central-Eastern Europe. We shall host the Chinese towards the end of the year. What Kielce will be like in future depends on this decision.

Additional funding, granted in a tender organized by the Polish Enterprise Development Agency, comes from the money saved in the Development of Eastern Poland Operational Programme. - "The tasks we have set ourselves are a response to the market's demand for new technologies and for an additional modern space designed for various types of business. The money obtained will allow us to invest not just in the development of entrepreneurs and students, but also of children and young people to whom some of the planned activities are addressed," announces Szymon Mazurkiewicz, director of the Kielce Technology Park.

From toddler to student

The Kielce Technology Park's ambitious plans will be realized in, among other places, a modernized building previously occupied by the College of Skills. The new premises will accommodate, among other things, the Incubator Group, including a special one dedicated to the IT sector. IT experts and programmers already active on the market will find a place here, as well as those only just learning their profession. - "We shall create modern office spaces for entrepreneurs, laboratories, an employee training centre operating under the auspices of major firms, and a centre for testing new projects and products. We shall also propose the creation of an IT cluster to interested parties," says Szymon Mazurkiewicz.

→

The building vacated by the College of Skills will also accommodate a kindergarten, with an innovative pilot curriculum for toddlers. - "We want children to be entertained by education from their very start. We expect entrepreneurs engaged in business in the Park to entrust us with their offspring. Located close to work, the kindergarten will be very convenient for them," says Justyna Lichosik, director of the Kielce Technology Park Promotion and Development Department.

The Park intends to appoint a building contractor still this year. Work on modernizing the old College building will start at the beginning of next year, and the building will be handed over in the middle of 2015.

A button from the printer

The Kielce Technology Park is banking on the development of design. The following will appear thanks to a grant from the EU: A Rapid Prototyping Centre and a Fashion Design Competence Centre. The first of these is a response to increasing market demand. - "Firms require prototypes that allow them to judge the aesthetics, utility and ergonomic qualities of their products. To test their customers' reaction, some firms introduce to the market a small series of products composed of a dozen or several dozen elements.

OTHERS PRESENT THEIR PRODUCTS, E.G. AT TRADE FAIRS OR DURING VARIOUS KINDS OF COMMERCIAL MISSIONS. "THANKS TO THE RAPID PROTOTYPING CENTRE, THE LAUNCH OF COSTLY PRODUCTION LINES MERELY FOR THIS PURPOSE WILL SOON BECOME SUPERFLUOUS," SZYMON MAZURKIEWICZ PROMISES.

It will be possible to create some pieces of equipment or entire products in professional 3D design and prototype laboratories. - "We plan to launch at least three technologies: Polymer, resin and metal alloy. Thanks to 3D printers working to an accuracy of 1/1,000 mm, high quality products can be designed. "The only restriction is size, no bigger than A4," says Dominik

Kraska, director of the Kielce Technology Park Consultancy and Technology Transfer Section.
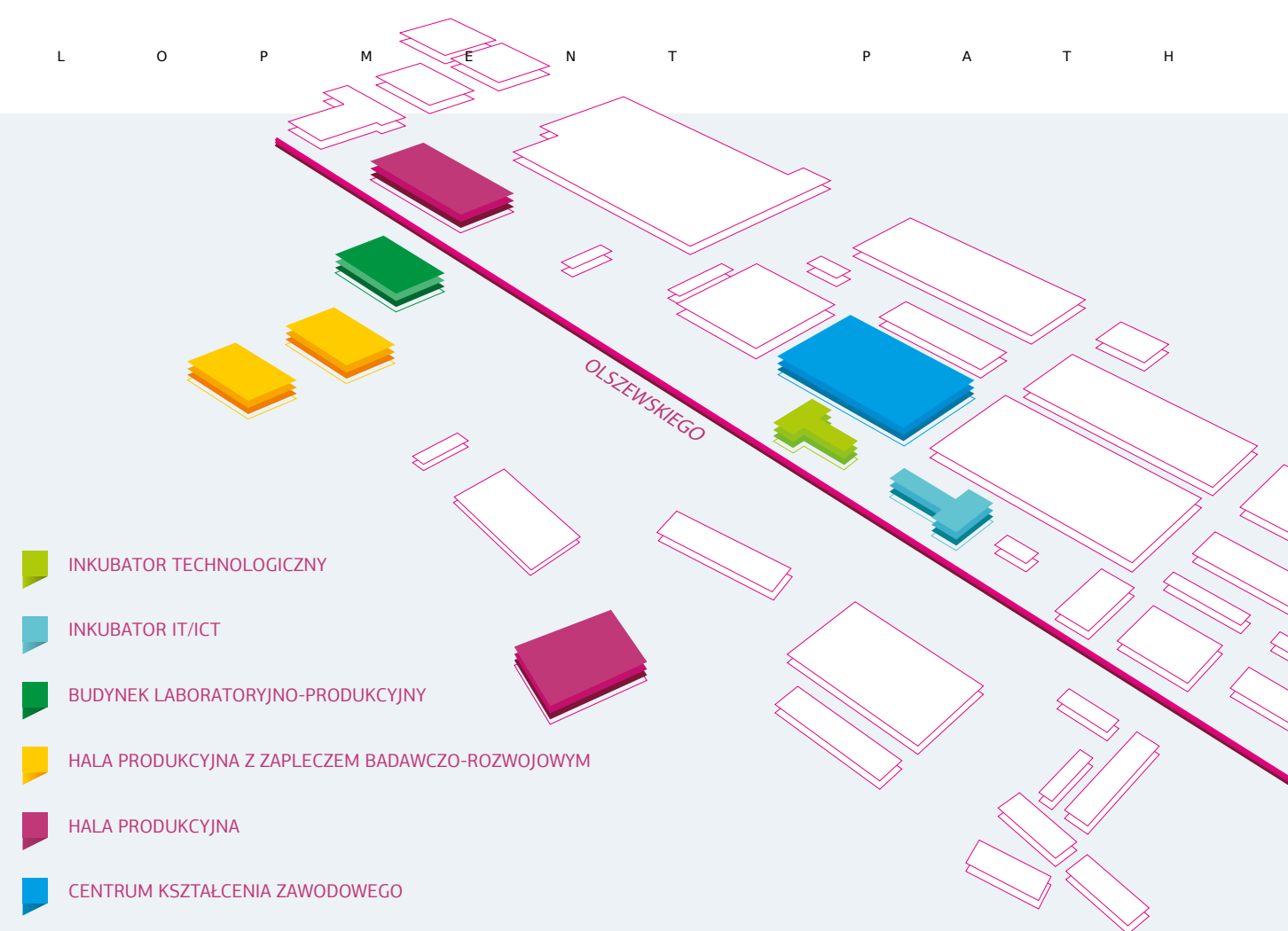
3D printers are used in many sectors: from clothing, via machinery, all the way to medicine. - "They allow to manufacture buttons, belt buckles, furniture handles or cogwheels. At present the only laboratories of this kind in Poland are ones that provide commercial services. For instance, Łódź specializes in the medical sector, producing bone implants," says Dominik Kraska, director of the Kielce Technology Park Consultancy and Technology Transfer Section,. The centre will operate for the benefit of entrepreneurs

at home and abroad. Because 3D printing is expensive (from PLN 500 upwards depending on the technology and complexity of the product) the Kielce Technology Park will produce the first 20 prototypes for free. - "The choice depends on whether a given product has a chance on the market," says Dominik Kraska.

The Centre intends to receive its first orders in the second quarter of next year.

Training concluded by production

The Fashion Design Competence Centre is another step on the way to effectively introducing students to the market. The students find their way from the Institute of Fine Arts of Jan Kochanowski University or the Academy of Fine Arts in Wrocław and Krakow, which have already collaborated with the Kielce Technology Park in two editions of the 'Design – a new dimension of commercializing knowledge' contest. - "At present, 20 firms in Poland are interested in employing creative young people open to new trends. Their ideas have already been adopted by, among others, the Kraków-based furniture company Fuerte Design, the paving stone manufacturer Libet S.A. and the LPP group, which owns five brands including Reserved, House and Mohito. This last venture in particular, when young people were hired to design a collection of clothes for House, has confirmed our conviction that entry to the clothes market was the right thing to do," admits Szymon Mazurkiewicz.

INKUBATOR TECHNOLOGICZNY

INKUBATOR IT/ICT

BUDYNEK LABORATORYJNO-PRODUKCYJNY

HALA PRODUKCYJNA Z ZAPLECZEM BADAWCZO-ROZWOJOWYM

HALA PRODUKCYJNA

CENTRUM KSZTAŁCENIA ZAWODOWEGO

The Fashion Design Competence Centre will operate under the auspices of a major Polish clothes brand (talks with potential firms are under way). Its specialists will teach young people the secrets of the branch, including: How to prepare a collection and then introduce it to the market. - "There will be workshops in the Centre: A design workshop equipped with computers with specialist software, a workshop for cutting and sewing, and a third workshop which will be an exact mock-up of the inside of a retail shop, in which students will learn visual merchandising," says Dominik Kraska.

The Kielce Technology Park wants the Centre to train students and freelancers from all over Poland. - "We will organize courses lasting several months, and make sure that they are free of charge for students. We would like the products that are made at the Centre to be sold on the market eventually. We want the Centre to commence operations in the middle of next year," says Dominik Kraska.

A new space for entrepreneurs

The Park is also preparing to build three modern production halls.

- "WE ARE STILL BEING APPROACHED BY INVESTORS INTERESTED IN ENGAGING IN BUSINESS IN THE PARK. YET WE ARE SLOWLY RUNNING OUT OF SPACE," SAYS SZYMON MAZURKIEWICZ, EXPLAINING THE DECISION TO EXPAND

Each hall will 3,500 square metres in size. Each one will have an office section and a section for staff breaks. In addition, one of them will accommodate a research-development unit designed for work with digital lathes. The remaining two halls, accommodating four entrepreneurs, will be fitted out by the occupants themselves. - "All the buildings will be environmentally friendly. We want to restrict their energy-intensity and also make use of renewable energy sources by fitting solar panels, among

other things," says Justyna Lichosik. The halls will be ready at the start of 2015. But that is not the end of the investment. In the Kielce Technology Park's current hall, the vacant space will be converted to fully-equipped offices by the end of next year. - "On the mezzanine we will create eight independently-functioning modules with a area of some 220 square metres each," says Lichosik.

On the ground floor of the main Kielce Technology Park building there will be a common work space. - "Those firms that use the Park's services only within the framework of the so-called Virtual Incubator, in other words they have no offices in our building, might want to organize meetings sometimes. We will make this possible for them by arranging co-working space equipped with desks, chairs, projector, all-in-one, TV set and comfortable seats," declares Justyna Lichosik. The new space is to be ready towards the end of next year.

Wizyta Minister Rozwoju Regionalnego Elzbiety Bieńkowskiej w KPT.

OLSZEWSKIEGO

A Park open to cooperation

THE CONSTRUCTION OF AN IT/ICT INCUBATOR IS ONE OF THE MOST IMPORTANT COMPONENTS OF THE DEVELOPMENT PLAN OF THE KIELCE TECHNOLOGY PARK. A PLACE WILL EMERGE THAT WILL ATTRACT WORLD CONCERNS, WILL GIVE YOUNG PEOPLE JOBS, AND WILL ALLOW THE PROPAGATION OF THE LIVING LABORATOIRY METHOD IN POLAND.

And all this in the immediate future. The ambitious plans have earned recognition and the Park has received funding from the Development of Eastern Poland Operational programme. Thanks to this, the former College of Skills building will develop into an exceptional location.

- "We have invited firms with huge potential to create the IT/ICT incubator. Their suggests and hints are very important for us. We have held many talks and listen to experts," says Kielce Technology Park director Szymon Mazurkiewicz.

He says that the firms with whom talks have already been held include: Microsoft Polska Sp. z o.o., DELL Sp z o.o., Altcom Akademia SA, NTT System SA and Sygnity SA. Meetings with representatives of IBM are also planned.

- "We are eager to encourage well-known brands to invest in Kielce. The IT Incubator is a space for young firms in the IT sector, but it is also an attractive location for mature firms with an established position, in other words strategic tenants," Szymon Mazurkiewicz stresses.

At the heart of the IT Incubator will be workshops based on the living laboratories method, which means that new products will be tested here. The opinions of judges will be very important when creating the final versions of articles. In the Park, firms will be able to conduct tests and design, test and introduce new solutions.

- WE SHALL TEST, AMONG OTHER THINGS: MOBILE APPLICATIONS, ASSESSING THEIR FUNCTIONALITY AND UITILITY. WE WANT TO HIRE AS MANY AS FIVE THOUSAND PEOPLE, SAYS THE KIELCE TECHNOLOGY PARK DIRECTOR.

A considerable part of the Incubator's tasks will be devoted to education and practical training for young people to work in IT enterprises. This idea is a response to the demand from firms which, despite the large number of college graduates, have problems with finding employees. The entrepreneurs who are seeking employees will be responsible for preparing the workshops.

- "We have resolved to join forces to help young people gain the right qualifications. And help employers find good, talented and creative employees," says Szymon Mazurkiewicz.

The Park authorities are anxious that more and more young people should decide to stay in Kielce when they have completed their studies.

- "That is why at the address of Olszewskiego 6 we want to create such conditions that investors will choose to locate themselves there. For new firms mean more new jobs," says the Kielce Technology Park director.

The recruitment of entities interested in locating their business in the new Incubator will start soon after construction on the new building has started. The investment is planned to commence at the beginning of next year. The Park will want to cooperate with large and strategic concerns, but it is still open to cooperation with young firms that are only just entering the market.

The concept of the IT/ICT Incubator was developed by the Warsaw firm ResPublic within the framework of the CentraLab project.

MOBILE APPLICATIONS – YOU CANNOT LIVE WITHOUT THEM

A DOZEN OR SO YEARS AGO, ALL BOYS, BIG AND SMALL, DREAMED OF HAVING A PEN-KNIFE. THE MORE BLADES IT HAD, THE BETTER. THE BEST KNIVES, APART FROM TRADITIONAL SCISSORS AND CAN AND BOTTLE OPENERS, ALSO HAD TOOLS WITH WHICH TO LOOSEN SCREWS, CUT PAPER, FILE A PIECE OF METAL, ETC. ETC. TODAY, THEIR PLACES IN THE DREAMS AND POCKETS OF BOYS OF ALL AGES HAVE BEEN TAKEN BY SMARTPHONES. THOUGH THEY ARE OF A COMPACT SIZE, THEY ALSO HIDE INNUMERABLE POSSIBILITIES. AND JUST LIKE POCKET PENKNIVES, THEY ARE INDISPENSABLE IN MANY SITUATIONS. HOWEVER, A BARE SMARTPHONE IS NOT ENOUGH. IT ONLY BECOMES UNIVERSAL WHEN WE START TO INSTALL INNUMERABLE APPLICATIONS, AVAILABLE IN VIR-TUAL STORES.

There is a lot to choose from, because the biggest such stores, Google, offering programs for Android, or the Appstore, with a dedicated IOS, already have over 2 million applications for sale. They turn a featureless smartphone into something we cannot live without. Let's try to choose a few of the most necessary applications, which are also free.

When each morning the alarm in the telephone brings us from the land of dreams back to the land of reality, the first question is: What time is it? Of course we will find the answer on the display of our mobile device. Then we want to know what we have to wear when we go out, especially in the autumn: Whether we need a thick coat or just a light jacket. We will find the answer in the smartphone app.

ALL SYSTEMS HAVE WEATHER PROGRAMMES INSTALLED, BUT THEY ARE VERY UNRELIABLE, SO IT IS WORTH BROWING IN A STORE AND CHOOSING A WEATHER PROGRAMME. THIS IS AN APPLICATION PRODUCED BY THE INSTITUTE OF METEOROLOGY AND WATER ECONOMY.

The weather forecast is prepared on the basis of radar indications and, what is important, human observation. That is probably why it is closest to the reality, albeit presented in an aesthetic manner. The program reports the current and expected temperature during the day, and whether we can expect sunshine or whether we should take an umbrella. We will also find information on wind strength and direction. If the weather forecasters expect abnormal weather phenomena, o which of course are increasingly frequent, the display warns which areas are affected and what the effects might be. So now we know all about the weather. Now let's listen to the news on the radio and drive away the sleep to the ac-

companiment of music. And again, all we need is a smartphone with the 'TuneIn Radio' application. This application, linked to the Internet, gives us access to virtually every radio station in the world. If we know the name of the station we want, we just enter it in the browser. If we want to find local broadcasters, we select the appropriate location and the application will find the stations for us. On the display we see a brief description of the programme being transmitted, and sometimes we even have a function equivalent to RDS. What is important is that unlike in the case of older phones with analogue radio, we do not need earphones that serve as aerials. Sound is of excellent quality even without then.

LET'S SAY WE ARE GOING ON A TRIP, SO WE NEED A MAP. AND AGAIN, ALL WE NEED IS A TELEPHONE WITH THE GOOGLE MAPS APPLICATION. THE GIANT FROM MOUNTAIN VIEW HAS PREPARED A REALLY HIGH-QUALITY CARTOGRAPHIC PRODUCT.

On it we will find even the smallest footpaths, not to mention newly-built motorways. New roads appear on the maps as soon as they have been completed. Not only that, we can view our entire route thanks to quite recent and precise satellite photographs. Google recently added a satellite navigation function to its maps. It works well, and even seems to provide directions faster than GPS, in addition to which it informs us continuously about traffic radars and congestion. The only problem is access to the maps. They are not installed on the device's hard drive, so we have to have an Internet connection. Using a mobile phone network for this purpose may turn out to be a serious strain on the driver's budget. There is one other thing is very useful, for example when choosing a hotel for a holiday – Google Earth.

Here we will find places that interest us, photographed at ground level. Thanks to this, we will not be cheated by a hotel proprietor who praises the peace and quiet and the view from the windows, but says nothing about the nearby factory or busy road. Google Earth will reveal them.
What if we are far from home and suddenly remember unpaid bills? We do not have to find a branch of the bank where we have our account. Most of today's banks already offer applications that let us perform virtually any banking operation without getting up from our deckchair. Thanks to them, a client can normally check his balance and view a bank statement. That is a very useful option, for example when there is a problem with paying by card. A pay terminal can reject our transaction or suddenly crash, and we get upset and do not know what is happening. By logging into the bank program, we can clarify the issue. Bank transfers are no problem. We can even apply for a loan if the bills for using the Internet devour all our savings...
All right, let's leave the holiday and get back home. Obviously a smartphone can be used to receive emails, surf the Internet and make video calls to friends. But it can also be used as a remote control for TV. One TV operator offers an application with which we can peruse current programme schedules on selected channels from anywhere, time a recording, and even switch to a different channel. It is not yet possible to adjust the volume or switch off the TV set. But that is just a matter of time. While on the subject of TV, of course we can watch live public television news programme on our little display. We only have to download a programme called TVP Stream. And what if we want to find out what Pope Francis is doing without waiting for the news? No problem. Programmers in the Vatican have created for us 'The PopeApp', with up-to-

date information on what is happening on St. Peter's Square and inside the basilica, and with professional live reporting during the Pope's public appearances.

WHEN SEEKING INTERESTING, NEW AND CHEAP APPLICATIONS, WE WILL BE HELPED – OF COURSE - BY A SPECIAL APPLICATION. APPZAPP WILL INFORM US OF ANYTHING NEW AND SPECIAL OFFERS IN THE APPSTORE.

Thanks to tiny icons on the display, the phone will be useful even when doing DIY. True, we will not saw a wooden plank with it or solder a piece of cable, but we can find a cable inside a wall – thanks to a metal detector. With the aid of an electronic spirit level we can check if, for instance, a floor is even, and a smartphone building application will check the quality of walls. A special set of tools called applets also includes a set square, altimeter, colour calculator, metronome and even a map of current earthquakes and storms. So in fact a single application contains over 100 applets. What for? Well... one never knows what one will need and when... What else will equipment manufacturers and application developers come up with? Perhaps a thermometer or a laser with which to attack UFOs? Perhaps they should consider adding to smartphones a few blades, can opener and a pair screwdrivers? For what use are e-penknives when the batteries run out....

Application by a Kielce Technology Park tenant

At the Kielce Technology Park a new mobile application has appeared called eXchanger, whose authors are employees of the firm Trustee – a tenant of the Park. The program won first prize in the AppAward contest for best Polish program of 2012 in the category business, finance and banking. eXchanger allows a comparison of exchange rates from over 30 on-line exchange booths. Exchange rates are listed starting with the most favourable ones.

CentraLab
partners of the project

Czech Centre for Science and Society (CCSS) – Czech Republic
www.ccss.cz

This is an independent non-profit association to which SMEs from the high technology and public administration sectors and research establishments belong. CCSS implements modern communications and navigation technologies and realizes international research projects. CCSS operates in the following sectors: agriculture, industry, education and services. However, the priorities are environmental protection and crisis management.

Technical University of Košice (TUKE) – Slovakia
www.tuke.sk

It is a leader in the development of innovation in the ICT sector in Slovakia. It employs over 900 teachers, and the staff have rich experience in realizing international projects. Research projects are realized by the following faculties: Economics, Engineering and IT, as well as Mining, Ecology, Management and Geotechnology. So far, the projects have focused on the creation of business links, socio-economic analyses of the impact of ICT, e-business and the creation of trust in business networks.
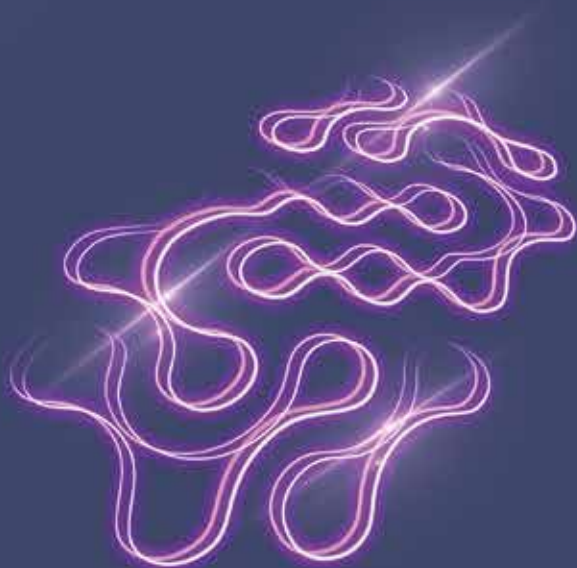
KIELECKI PARK TECHNOLOGICZNY

Kielce Technology Park (KPT) – Poland
www.technopark.kielce.pl

This is a multifunctional area of commercial activity, equipped with a modern and professionally prepared infrastructure and attractive sites ready for investment. With its activity it supports modern innovative firms and creates optimal conditions for the development of enterprises already in business. The Kielce Technology Park gathers entities from the scientific and business community. It permits the commercialization of the results of scientific research. It engages in the realization of international projects.

University of Maribor (UNMB) – Slovenia
www.fov.uni-mb.si

It is a leading institution ensuring excellent conditions for regional development in Slovenia. The university is very active in international cooperation, belonging to the Association of European Colleges and the ALADIN network, among other things. The project's partner is the Faculty of Organizational Studies, which is currently conducting programmes in the sphere of IT, human resources, education and business and work systems. It engages the business and public organization sector, users, IT service providers and universities. It operates as an eLivingLab and is a member of the European Network of Living Laboratories.

Informatica Trentina SpA

Informatica Trentina S.A. (INTN) – Italy
www.infotn.it

The company is located in the province of Trento and coordinates the TasLab Living Laboratory initiative, which brings together the work of ICT research establishments and numerous local enterprises. TasLab is developing dynamically thanks to the support of the local authorities and the company's involvement in many innovative projects for R+D establishments on a national and international scale. TasLab also cooperates with other laboratories (including in Slovenia and Ireland, and with the European Space Research Institute in Trascati and with LL Prof. Inchingolo in Triest).

Leading Partner
E-Institute (EZVD) – Slovenia
www.ezavod.si

This establishment realizes projects in ecology, energy, economics and e-business in the research and development sector. Many of these projects are subsidized out of European funds. It acts like a Living Laboratory, concentrating on energy efficiency and the development of innovation. The long-term strategy of the E-Institute's team is to promote sustainable energy efficiency and renewable energy sources. Modern ICT technologies permitting new forms of cooperation with clients are to be a means with which to attain this goal.

REGIONE PIEMONTE

The Piemont Region (PDMT) – Italy
www.regione.piemonte.it

Piemont is a region in northwestern Italy. Numerous research and educational establishments are at home there. They include 4 universities, over 220 public and private research centres, 380 laboratories, 6 science and technology parks and 12 centres pf innovation and of support for incubators. Here is also the home of the Fiat brand, the city of Turin. The region also serves as a base for leading specialist enterprises in the spheres of robotics, ICT, the natural sciences, energy and the environment.

CentraLab
Central European Living Lab for Territorial Innovation

FHV

University of Vorarlberg (FVH) – Austria
www.fhv.at

This university possesses well-documented experience in creating solutions for over 100 enterprises and international organizations, as well as in effectively seeking funding and grants from outside sources. As a University of Applied Sciences, it focuses on cooperation with business and industry. For the purpose of this cooperation, the University has concentrated its resources on three strategic areas: micro-technology, user-oriented technology and product and process engineering processes.

CyberForum
HIGHTECH. UNTERNEHMER. NETZWERK.

CyberForum (CF) – German
www.cyberforum.de

This is one of the biggest and fastest-developing IT networks in Germany. It is also a regional point of coordination for the South German Software Cluster. Set up as an association in 1997, it supports start-ups and young entrepreneurs from the Karlsruhe area. CyberForum now has over 1,000 members, including state and regional institutions, educational establishments, SMEs and large corporations from the IT and new technology sectors. Thanks to the large number of cluster projects at local level, the Forum plays a major role in the development of internet and mobile technology.

CORVINNO
Technology Transfer

Centre of Technology Transfer Corvinno (CTTC) – Hungary
www.corvinno.hu

This was founded as a spin-off by scientists from Corvinus University in Budapest. It conducts prestigious research projects in modern ICT technology and in the management and transfer of know-how. It already boasts successes with consulting in public and private sector companies.

Central European Living Lab for Territorial Innovation