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A Blue Print for an Information Technology Park in Moldova

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About the German Economic Team Moldova

The German Economic Team Moldova (GET Moldova) advises the Moldovan government and other Moldovan state authorities such as the National Bank on a wide range of economic policy issues. Our analytical work is presented and discussed during regular meetings with high-level decision makers. GET Moldova is financed by the German Federal Ministry for Economic Affairs and Energy under the TRANSFORM programme and its successor. Our publications are publicly available at our website (www.get-moldova.de).

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Executive Summary

Information Technology Parks are used in many countries worldwide as a tool to promote IT sector development. Setting up such an IT Park is also currently being discussed in Moldova with the hope to attract and develop IT companies by overcoming a shortage of skilled staff and a poor business and investment climate which increasingly hamper IT sector growth.

However, an IT Park in Moldova will only be successful in overcoming those obstacles and attracting investors, if the park is able to provide a right combination of a high quality infrastructure, support services and other benefits which provide a distinctive advantage for its residents compared to not being based in the park. To achieve this, an IT Park has to be treated as a business venture and led by a management that has the right experience and incentives to make the park a success. Thus, the Park should be managed either by an outright private company or by a privately-structured company in public ownership which has the means and mandate to attract the right talent and reward success accordingly.

The IT Park should target IT services companies as this is where Moldova has already a considerable presence and thus can build on existing knowledge and value chain. It should target both large established as well as young, small and medium sized enterprises – however, keeping in mind that the requirements will differ for both groups. The best location of the park would be Chisinau's city centre as only this offers the close proximity to an urban social infrastructure which young, talented and footloose IT professionals demand (who could as well choose to work in London, Moscow or elsewhere). The park's infrastructure (its office space and utilities) needs to be state of the art and able to compete with what is offered elsewhere in the world.

The park will provide business and support services such as legal, tax, financial, management and entrepreneurship advice in order to help resident IT companies – especially the small-sized entrepreneurs who now chose to work in the grey economy – to overcome the poor business and investment climate in Moldova. If done right, this offering could provide a key advantage compared to being based outside the park.

Another core benefit of the park will be its education centre which provides post-graduate education in order to make IT graduates fit for employment. As such, it will provide a steady stream of suitably skilled graduates for companies in the IT Park which are currently in high demand but short supply. A close link to Moldova's universities will make sure that both sides benefit.

If implemented successfully, Moldova's IT Park will be able to offer a superior infrastructure, an environment where companies can focus on business as opposed to overcoming the administrative burden and a steady flow of IT graduates with a relevant skill set. All this will be offered at cost which are significantly below the cost the investors would have to pay anywhere in Western Europe or the United States.

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1 Need, aim and objectives of an IT park

Need for an IT Park

Moldova is home to a comparatively successful Information Technology and Communications sector which, over the past years, has developed quicker than most other sectors of the economy. However, there is growing evidence that a number of short-comings stop the sector from growing to its full potential. To address and reduce those inhibiting factors, an IT sector development strategy is currently being developed by the Moldovan Ministry of Information Technology and Communication (MITC) (2013). One of the instruments proposed there, is the use of Information Parks to foster the further development of the sector.

Aim of the IT Park

Indeed, international experience shows that IT Parks can be successful, if – and only if - they *provide a distinctive competitive advantage to their residential companies and entrepreneurs which may not be available to companies outside the park (UNIDO 2012)*. To do so, the IT Park has to offer a state-of the art infrastructure with a good supply of talented and well-trained individuals at significantly lower cost than those a company would face for a similar location in developed countries.

Thus, the planned IT Park should offer conditions which, combined, are better than the conditions investors can find for this price outside the IT Park - either in Moldova or abroad (UNIDO 2005).

Objectives of an IT Park

By providing such a superior product offering, the IT Park can help to achieve the following objectives: (World Bank 2008)

- Create an improved business environment for new and established IT companies
- Development of new IT-based firms
- Growth of (IT) SMEs
- Leverage and improve the existing advantages of the Moldovan IT industry
- Generate cluster effects through shared resources, research and synergies
- Thus, promote economic growth and job creation

IT parks can come in many different shapes. This poses the question "*Which particular IT Park concept is suitable for Moldova?*" - the main question of this policy paper.

This policy paper presents our recommendations for an IT Park concept. It outlines how a potential IT Park should be organised, funded, which infrastructure would be required and what services and benefits it should offer to its residents.

The findings are based on discussions with IT industry professionals, investors, IT Park operators and IT investment promoters in Moldova and Germany. Additionally, it draws on international experience of what has worked and what has not worked for the various IT Parks in operation internationally.

Finally, when developing this concept, we tried to consider factors and experience that are particular for Moldova such as existing laws which regulate Free Economic Zones, Industrial Parks, Technology Parks and other special economic zone concepts.

2 Organisation of Moldova's IT Park

There is no one size fits it all approach for IT Parks and the way Moldova's potential IT Park will be organised needs to take into account the specific conditions in the country. It should address the needs formulated by the stakeholders and the various IT sector assessments produced in the past. Based on this assessment a number of strategic decisions need to be made, including:

- Which industries should be targeted?
- Who owns such an IT Park?
- How should it be managed?
- How will it be funded?

In this section we will present our recommendations regarding those aspects. More operational aspects will be discussed in chapter 4.

2.1 Which type of industries and which kind of companies should be targeted?

The type of companies which the IT Park aims to attract influences fundamental decisions about the required features of the IT Park: Its location, the infrastructure requirements and services offered. For example, a hardware producer has very different requirements than an IT software development start-up company. Indeed, the umbrella term *Information Technology* covers a wider range of rather diverse products and services (see Annex 1 for details). Therefore, before a detailed IT Park concept can be drafted, at least a general notion of the industry which should be targeted is needed.

Focus on Moldova's existing IT sector expertise

International experience suggests that most of the successful parks are aimed at products and services in which their host country already has had a noticeable presence and thus a competitive advantage. Such a focus on existing industries means that the IT Park can build on an existing knowledge base and tested value chain. Indeed, at least at the beginning, it is not feasible for Moldova to attract companies like high tech and research intensive IT hardware developments which are not yet present in the country.

However, while IT hardware development and production is yet absent, industry reports (ATIC (2012), IDC (2011)) and official statistics (National Bank of Moldova 2013) suggest that Moldova has a successful Software Development and IT Services sector. The data show Moldovan companies as relatively strong in areas such as application customisation, support services, business process outsourcing (BPO), managed services and research services. With companies like Endava, Allied Testing, Pentalog, and CEDACRI present in

Chisinau, the city has already a significant presence of well-known IT services providers. Furthermore, there is ample evidence that the IT services sector is not only concentrated at the low value end but that it also provides high-end IT research & development, customisation and consulting.

Which type of companies?

There is also the question if the park should be rather focussed on small medium sized enterprise (SME) and start-up companies or attempt to attract established investors. We recommend orienting the park towards both groups. However, it is important to keep in mind that this will also require two different approaches as both groups have somewhat different requirements.

Namely, IT start-ups and IT SMEs need an environment where they can exchange views (i.e. co-working), network, find collaborators but also access coaching and get support in running and growing their businesses.

Larger more established companies, on the other hand, already have a proven business model but, most of all, require a steady supply of talent, a good infrastructure and support services. To meet the diverging requirements of both groups, the IT Park may want to provide two different zones catering for each respective group.

Conclusion: The IT Park should be used to leverage the existing competitive advantage of Moldova's IT services sector. It should provide an environment that is suitable for both domestic and international investors. It should seek to attract both large established players as well as young SME¹ – however, keeping in mind that young SMEs may require a different approach than more established larger companies.

2.2 Ownership and operations of the park

Who then should own and operate such an IT park? This is a crucial question as it determines if the IT Park is managed professionally, the management has sufficient incentive for its success and the funding of its infrastructure and services is secured well into the future.

Indeed, the big differences observed in the performance of existing Industrial Parks and FEZs in Moldova vividly show that the way Industrial Parks are organised can have great impact on their success (Berlin Economics 2012).

An IT Park is an extremely entrepreneurial undertaking, which requires a management with very relevant IT sector expertise, private sector experience and attractive incentives for success.

¹ Of course, there may also be SME which have been active for several years. Those are likely to require an approach which is similar to the one used to cater for established larger companies.

The CEOs of IT Parks need to be entrepreneurs themselves. An IT Park run by a bureaucrat without private sector experience is doomed to fail. For example, the CEO of the CHIC IT Park in Berlin has a track record of co-founding and managing a multi-million dollar private sector company. To attract this kind of talent, the IT Park needs to provide the right incentives.

Management of the IT Park

This would speak in favour of a full-fledged private IT Park. However, a fully private IT Park may lack the state backing for permits, legislative support, cooperation from education and research institutions and access to the right location required to realise such as project quickly. Additionally, it may be difficult to attract a suitable private investor for such a long-term undertaking in the current investment climate. Finally, it can be argued that some objectives of an IT Park – such as support of IT SMEs – are maybe in conflict to a pure profit driven undertaking.

With those requirements in mind it is clear that the management and operation of the IT Park should be in the hands of a privately organised company.

To meet both objectives, IT Parks in Berlin are often run by state owned Limited companies. As private companies – outside the government – they can offer attractive packages to the management. However, public sector (co-)ownership means that profits are not the main objective. Indeed, the parks we spoke to are encouraged to break even and reinvest any surplus profits. If such a model is workable in Moldova, this should be the chosen approach as it would provide the right incentives for the IT Park management.

If such an arrangement is not feasible, the management should be contracted out to a private profit-oriented company. A big plus here would be a management company with specific experience in the IT sector and managing IT Parks. It is important that contractual arrangements reward for success of the IT Park, for example by linking management fees to the revenues of the IT Park. If this approach is chosen, an international tender should be conducted in a very transparent manner in order to select a suitable management company.

Financing of the IT Park

The actual business and financing model of the IT Park should be developed in a detailed business plan (see section 5.2). The business plan needs to ensure that the park has the necessary funds to cover the required initial investments as well as operational expenses well into the future and account for the case that uptake lags behind expectations. To start with, the government should make available a suitable location including land and buildings. Additionally, the park would require financial support for an interim period until business model is self-supporting, while keeping in mind that this process may take a long time.

2.3 Park promotion and coordination

A working IT Parks brings together highly-skilled and like-minded people as well as a mix of small companies and large investors. Within the IT Park cooperation between residents is very much encouraged and this is in itself a major advantage of being based in the park. Young companies find it easy to find collaborators and exchange ideas with other start-ups while large companies can easily hire support staff for projects. If done right, the IT Park will develop its own brand which is likely to stand for the best IT services Moldova has to offer. Being able to advertise with the IT Park brand is a significant advantage of being based in the Park (UNIDO 2005).

However, such a “brand” will not appear on its own, it will have to be developed and maintained over time. This poses the question of who promotes the IT Park and attracts new residents. Such a promotion of the IT Park is ideally done by dedicated person or team, with the knowledge of the industry and a suitable international network of contacts. In addition to promoting the IT Park, this person may also coordinate between the IT sector players outside and inside the park.

It is also important to note, that the IT Park promoter may not necessarily be part of the actual park administration as the administration of the park and networking and promotion are some very different skills sets.

This is not to say that national FDI attraction MIEPO and the Investment Attraction Team do not have a role in producing leads for the park. Indeed, “*Berlin Partner for Business and Technology*” – the Berlin Investment Attraction Agency which assisted us for this study – has a clear mandate to provide leads for the various IT Parks. Additionally, close cooperation and awareness with the Chamber of Commerce, universities, business associations, etc. is vital for the IT Park success.

Box 1: Importance of an “Anchor Tenant”

International experience suggests there are great benefits in attracting a reputable anchor tenant as one of the initial residents of the IT Park. This could be either a successful national or international IT sector company. This so-called ‘Anchor Investor’ would be a showcase for the IT Park success making it much more likely to attract additional companies.

Additionally, there would be other synergies between such a large player and the residents of the IT Park. It would present employment opportunities for graduates of the knowledge centre and could provide at the same time input to the knowledge centre (see section 4.2). An anchor tenant may also provide outsourcing business to smaller tenants, common business opportunities, joint research and development, help in assessing foreign markets and boost to the reputation of the IT Park and/or individual start-up companies.

As such, the future IT Park concept should aim to attract a suitable IT company to the park using favourable conditions if required.

3 Critical requirements: Location and physical infrastructure

3.1 Location of the IT Park

The choice of the right location is critical for IT Park success and needs to consider a number of aspects. At the end of the day an IT Park is an investment property and the location choice is the most critical factor of its success (UNIDO 2012).

Close proximity to the urban centre

The location of the planned IT Park needs to reflect the type of business and workforce it wishes to attract. As described above, we recommend to initially focusing the IT Park on IT services provided through established as well as young entrepreneurs. International experience of IT parks in Germany, Russia and India show that an IT Park with such a focus needs to be located within a large city to make use of existing urban and social infrastructure there (World Bank 2008).

Indeed, in Berlin almost all IT Parks and co-working centres are based in Berlin's hippest inner-city districts like Prenzlauer Berg. Only the Technology Park Adlershof is based outside the city centre. However, Adlershof caters for high technology and hardware development enterprises which require sophisticated laboratories and testing facilities which are not available elsewhere.

In Moldova's case that really only leaves Chisinau's city centre as a suitable location for the planned IT Park. Only such a location is likely to attract the bright, cosmopolitan type of people who can chose to work internationally. In order to have them staying in (or returning to) Moldova, the IT Park needs to be attractively located in the very centre of the city with close access to local amenities.

Close proximity to university

A second consideration for the location is the close link to a higher education facility as education will be an essential aspect of the proposed IT Park concept (see section 4). As such the IT Park should be either physically connected or in close proximity to the Technical University, which is the main provider of IT graduates in Moldova.

Easy access to airport

Also, with the export market likely to account for the overwhelming share of demand, the IT Park should be relatively close to the airport. However, as the airport is based only half an hour outside Chisinau, this is a given for all locations in the city.

3.2 Buildings and facilities

The buildings and facilities of the IT Park need to offer state of the art, dedicated infrastructure and facilities which meet the needs of an extremely standardised and globalised IT industry (UNIDO 2005).

Contemporary building

This is especially true for the buildings as IT Parks cater for people who could also choose to work in London, Moscow, New York or any other international location where they would be offered clean, attractive, state of the art working spaces. So Moldova's potential IT Park needs to match those standards. The buildings can be refurbished or purpose built as long they are contemporary. Indeed, many IT companies in Berlin are based in refurbished industrial sites such as old breweries or factory buildings.

Physical separation between start-up and established companies

It makes sense to consider two zones: One for start-ups or young and small enterprises and one for more established and larger companies. The start-up zone will have to offer options for exchange and socialising like co-working, large open canteens and cafes. As one IT start-up founder suggested to us "Young people working self-employed do this to escape the tread-mill of corporate life – so they do not wish to work in place that could as well be the offices of an insurance company or public administration". So co-working is essential especially if a strong start-up and freelance scene exists as it offers incentives for them to professionalise and incorporate which should be a major objective of the IT Park.

For the more established companies, a more functional approach² is warranted to some extent. Exchange and collaboration are for them less important than having representative offices where they can receive clients.

For both established and start-ups it is most important that the building offers "plug-and-play" infrastructure which allows companies to set up immediately and extend very quickly without the requirement for building work, re-installations, rewiring or the like.

The building should offer work spaces and offices in various sizes starting from co-working facilities which offer single desks to full floors with hundreds of square meters of office space for large investors.

Parks centre

The building should incorporate the parks centre which hosts the park administration and the support services. There should also be common facilities such as meeting rooms and rooms suitable for conferences and trainings. Finally, the main building should offer social facilities such as cafés a canteen, gyms etc.

Rental Agreements

Especially, IT start-ups and IT SMEs require rental contracts which are "all inclusive" meaning that all charges such as electricity, telephone, internet, common services, etc are included in the rent. The contracts should be very flexible with little or no cancellation

² However, even larger companies may still value some "factory feel". Consider online retailer Zalando in Berlin who are based in an old transformation station.

periods. Offering such an all-inclusive yet flexible rental agreement at cost below the rent outside of the park would be a distinctive advantage of the IT Park.

3.3 Data connection and storage

Established IT software or services providers will be one of the main groups the IT Park targets. The requirement to process and store large amounts of data is inherent to most of their business models. Therefore there is a need to store and process large amounts of data within the IT Park using secure servers which can operate with a minimum of interruption. Such servers require uninterrupted electricity supply, air conditioning, fire safety, specific wiring requirements and requirements related to the building structure.

Usually five tiers of server security depending on the level of protection against service failure are distinguished (Bitcom 2013). Large investors with business models that require uninterrupted server supply will only consider locations which provide servers that meet the requirements of tier 3 or 4 (see Annex 2 for further details). As such, providing a safe, certified server would be an important infrastructure aspect for the IT Park.

However, this does not mean that the park needs to keep in store the actual servers. Commonly the park would provide a suitable server room which has secure access, is cooled, provides fire safety, locked and also the server racks. The actual servers will then be provided by the user or bought on demand. However, the IT Park may wish to provide a common server for smaller investors.

State-of-the-art connectivity

Another essential requirement is a state of the art data and voice connection of the IT Park with the outside world. It should offer sufficient capacity and speed to cater for the start period as well as future extensions.

4 Services and benefits offered

While it is important to get infrastructure right it is not a guaranty for success. What distinguishes the successful IT Parks from the ones that never get off the ground is the type and quality of services offered. So which services should Moldova's IT Park offer?

4.1 Administrative and business support services

IT companies, like other companies, want to be able to focus on business as opposed to spending time and effort on dealing with the bureaucracy and the administrative burden. This is especially true for small and medium sized enterprises and start-ups which may not have the skills and resources to deal with manifold obstacles which the Moldovan bureaucracy presents to them.

It is important to keep in mind that most IT contractors can make use of the alternative to operate in the grey economy as they can work through freelance portals such as “elance” or “odesk” with no interaction with the state authorities whatsoever. Administrative support which reduces the administrative burden for IT companies based in the park is an essential pre-requisite to lure those IT professionals back into the official economy. If done right, administrative support services also offer a distinct advantage for other, larger investors.

Administrative support in dealing with the bureaucracy

To achieve this, the IT Park needs to offer an uncomplicated, single contact point which helps with all the administrative burdens that make life for companies outside the park so difficult. The IT Park management would be the main facilitator for companies applying for permits, licenses, patenting and intellectual property rights.

Additionally it should help residents to deals with the various inspections. Ideally any inspection would need to go first through the IT Park management thus sheltering residents from undue pressure³.

Business services

In addition, the IT Park should offer competitively priced (or even free) business support services which assist especially the smaller IT companies in all aspects of running their businesses. This should include:

- Legal, financial and tax advice
- Recruitment services
- Entrepreneurship and business management support
- Marketing support
- Support in accessing export markets
- Matchmaking with large companies

The services could be offered through the park management or private operators who are based in the IT Park. Subsidising the cost of those services could be a sensible financial incentives offered by the IT Park (see section 4.4 below). Indeed, in many of Berlin’s IT Parks support and advisory services are often offered without cost or at very low rates in an effort to support SME growth.

Finally aiming especially at IT start-ups, IT Parks in Berlin and other successful IT locations often offer support in areas such as project development and management, Connection to the relevant business networks, access to foreign markets, participation in trade fairs, recruitment fairs as well as support for holding conferences and events.

³ Similar protection is already offered for residents of Moldova’s existing Free Economic Zones and Industry Parks who consider this one of the key advantages of being based within the zone or park.

4.2 Education centre

One of the main constraints for the IT sector is a lack of IT graduates who are equipped with the relevant skills demanded by employers in the IT sector (GET Moldova 2013). Thus, providing additional education to top-up the skills of recent IT graduates as well as more experienced professionals would be another important value added of the planned IT Park. As this is currently such a major obstacle, an education centre should be part of the initial set-up of an IT Park.

The education centre would provide the commercial IT and business skills which are currently not offered to IT graduates through the state higher education system. However, the education centre should not be seen as competition to public sector offerings but rather as an addition. Indeed, the IT Park should establish close links to existing academic institutions. While current IT students, IT graduates and working professionals could top up and update their skills, IT professionals could also provide training and courses in the existing universities.

4.3 Start-up funding, venture capital, private equity and angel investment

Providing finance, especially for young enterprises, can be an important – although not essential – aspect of successful IT parks. Whether Moldova's IT Park should offer start-up funding depends on two aspects. First, does Moldova's IT Park want to have at least partial focus on start-up companies? As outlined in section 2.1, it is our view that the planned IT Park should focus on both start-ups and established enterprises.

Second, there is the question if the host country already offers a well-working capital market for venture capital, private equity and SME financing. As this is not the case in Moldova, it would be beneficial if the IT Park were to offer some funding options for start-ups and small and medium-sized enterprises.

Venture capital financing not feasible

This does not necessarily have to entail outright venture capital financing – funding of a company in very early stages where the investor takes an interest in the company. Venture Capital is only relevant for a very small share of young companies and requires a sophisticated investor and usually involves relatively high sums of money.

IT Park to facilitate bank loans or access to state support

As the capital need for SME is usually rather small, it would be already a big value added if the IT Park would assist residents in accessing available bank finance.

The state of Berlin also has a state-owned development bank which offers an array of different grants, loans⁴ and venture capital (as joint investment with private co-investors) to young companies to help them grow. Such an offering is a good addition to existing bank finance and helping companies to access it would be a good additional benefit.

Sponsoring and angel investors

Other funding and expertise could be provided by the potential anchor investor or other large business conglomerates operating in Moldova. Such angel investors or sponsor may be willing to set up funds which provide either loans or private equity to young companies. However, similarly important may be the accompanying advice and coaching provided by such investors alongside the actual financing.

A key role of the IT Park and its coordinator is to provide a network to those business angels. Resident companies which have been successful in establishing themselves in the market may in the future themselves offer angel investments to the next generation of young companies.

Business incubation

Ideally, start-up financing is combined with business incubation. Such a business incubator would provide a 'safe environment' for young companies so they can grow up to become full residents of the IT Park. Our previous policy briefing PB/01/2010 outlines the main aspects of business incubation (GET Moldova 2010).

To sum up, while funding for residents companies is a good addition to an IT Park, it is not essential. The offer of the IT Park may at the beginning be limited to helping young companies to better access bank loans. Additionally, an important source of start-up funding is often its own revenue. So by advising companies how to sell well, access new market and thus increase their revenues, the IT Park may already provide sufficient additional finance.

4.4 Incentives and regulatory exemptions

Finally, there is the question whether the IT Park should offer potential investors subsidies, tax exemptions or other incentives to attract them to the IT Park. This question is much debated with the opponents arguing that this leads to windfall profits of companies who would have invested anyway. The supporters, on the other hand, argue that industrial parks need to offer meaningful incentives in order to attract investors amidst stiff international competitions.

⁴ To specify, IBB only directly provides micro-credits, other loans require a loan offer through a conventional bank which may then be topped up by IBB. That makes it difficult for start-ups to access loans.

In general there are three types of incentives that can be offered:

- Outright subsidies (i.e. an amount of money for each job created)
- Tax exemptions (i.e. reduced corporate profit tax)
- Regulatory exemptions

Normally the side effects and financial burden are largest for subsidies, followed by tax and regulatory exemptions. When considering whether incentives are needed, it makes sense to assess the entire package (infrastructure, services and incentives) the IT Park would offer and compare it against the competition. That is, does the IT Park need incentives to present a convincing product offering when compared with the options outside the park and in regional competition?

Subsidised rent or services

It is our view that an IT Park model if it follows our blue print would not need outright subsidies to be competitive. Apart from being costly, such subsidies would probably require legal changes and parliamentary approval which is not assured and could also delay the entire process.

There may be a case however for subsidising the rent or usage fees for residents for initial periods. Similarly, administrative and business support services could be offered at low costs. Indeed, the IT Park administration should have some discretion in offering subsidised rates to potential tenants.

Regulatory exemptions

Regulatory exemptions are less problematic and the IT Park should offer exemption from some of the administrative burdens faced by companies outside the park.

Especially the protection from undue inspections as currently offered in Moldova's Industrial Parks and Free Economic Zones (according to which inspection can only occur once a year, on a single day) would add a distinctive advantage to the IT Park.

Indeed, this protection from frequent and arbitrary inspections is one of the main benefits usually stated by occupants of Moldova's Industrial Parks and Free Economic Zones (Berlin Economics 2012).

Thus, if feasible, IT Parks could make use of the same law that regulates Industrial Parks. That way there would be no need for lengthy legal change and parliamentary approval.

5 Summary and suggestions for next steps

This final section of the report presents an overview of the proposed concept and first steps for its implementation. To reiterate, an IT Park is a business venture. As with any other business, the concept should have enough flexibility to modify the concept during the implementation period. That would allow the concept and business plan of the IT Park to be changed should new facts make this necessary.

5.1 Overview IT Parks concept

To sum up, our proposed concept is based on best international practice for IT Parks while at the same time taking into account some of the particular short-comings which currently hamper Moldova's IT sector development. If implemented successfully, the business park will provide a world class infrastructure and will offer low cost business services, administrative support and regulatory exemptions which are likely to reduce the administrative burden for residents. Finally, its education centre would provide a steady supply of IT graduates with relevant skills which currently are in such short supply.

Table 1 below provides an overview of the main features of the proposed IT Park.

Table 1: Summary of the proposed IT Park concept

Feature	Recommendation for Moldova's IT Park concept
Targeted industries / companies	<ul style="list-style-type: none"> • Software and IT services • Established companies • SMEs and start-ups
Location	<ul style="list-style-type: none"> • City centre Chisinau • Close proximity to higher education • Close proximity to social-urban infrastructure
Buildings and facilities	<ul style="list-style-type: none"> • State of the art, contemporary building • Flexible "Plug and play" infrastructure • Consider two different zones: <ul style="list-style-type: none"> ○ "Cool" loft atmosphere for start-ups with ample opportunity for exchange and cooperation ○ More functional and serious for established companies • Co-working, open space for SMEs and start-ups • Flexible, all inclusive rental agreements
Connectivity and data storage	<ul style="list-style-type: none"> • Dedicated server room • High speed backbone
Administrative and business support services	<ul style="list-style-type: none"> • „Single window" support with permits, licences and other dealings with public authorities • Subsidised business support services such a legal, financial and tax advice
Education centre	<ul style="list-style-type: none"> • "Finishing school" offering post-graduate courses • Objective: Provide commercial IT and business skills demanded by investors • Dual system: Parallel work and train
Incentives and regulatory exemptions	<ul style="list-style-type: none"> • Subsidised rent /usage fees for limited periods of time, e.g. 3 years • Offer free or subsidised business support services especially for start-ups and SMEs • Protection from arbitrary inspection similar as in Industrial Park Laws • Keep tax exemptions to a minimum

Source: Own analysis

If done right the IT Park will constitute a product offering, which embodies a distinctive advantage compared to other locations outside the IT Park. In addition, by attracting many like-minded entrepreneurs, the park is likely – over time – to provide significant cluster effects. Residents will find it easy to collaborate with one another as the park significantly reduces transaction costs and risks.

An additional cluster effect will result from cost advantages due to the shared use of common services and facilities. Especially for start-ups and small and medium sized companies this is likely to represent a significant benefit.

5.2 First steps to implement an IT Park concept

Naturally, this policy paper only presents an initial concept for an Information Technology Park in Moldova. The next steps required to implement this concept are:

- 1) Draft a detailed business plan outlining capital requirement
- 2) Secure funding
- 3) Identify a suitable location
- 4) Set up / tender the development and management company
- 5) Identify and approach potential anchor tenant
- 6) Park development and opening of the park

To specify and test the concept a detailed business plan is required. This should be developed by an international consultant with proven expertise in planning, setting up and running IT Parks in other countries.

At its core this business plan should specify how much capital is needed and which additional annual subsidies may be required for the first years of operation. It should also short-list suitable locations.

Based on the business plan the necessary start-up funding and continued financing of operational expenses need to be secured well into the future.

Finally, a management company which has the right expertise and incentives to develop and operate the IT park needs to be created or contracted.

Annex 1: Possible sectorial focus of IT Parks

- Informationstechnik (IT) und Telekommunikation
- Web Design / Web Portals
- Computer games
- Software development
- Cloud services / data storage
- Telematic, mobile and mobility IT
- Multimedia
- Telemarketing, Telemedizin
- Satellite and Wireless
- Internet services and design
- Audiotechnology
- Digital picture processing
- Business support services

Annex 2: Description of server room security levels

Tier Level	Requirements
1	<ul style="list-style-type: none"> • Single non-redundant distribution path serving the IT equipment • Non-redundant capacity components • Basic site infrastructure with expected availability of 99.671%
2	<ul style="list-style-type: none"> • Meets or exceeds all Tier 1 requirements • Redundant site infrastructure capacity components with expected availability of 99.741
3	<ul style="list-style-type: none"> • Meets or exceeds all Tier 2 requirements • Multiple independent distribution paths serving the IT equipment • All IT equipment must be dual-powered and fully compatible with the topology of a site's architecture • Concurrently maintainable site infrastructure with expected availability of 99.982%
4	<ul style="list-style-type: none"> • Meets or exceeds all Tier 3 requirements • All cooling equipment is independently dual-powered, including chillers and heating, ventilating and air-conditioning (HVAC) systems • Fault-tolerant site infrastructure with electrical power storage and distribution facilities with expected availability of 99.995%

Source: Wikipedia (2014)

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