

Leveraging clusters to increase the effectiveness of free economic zones in Uzbekistan

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Executive Summary

Building upon previous studies and reforms initiated, this study examines – from an industrial policy perspective – the potential for leveraging the cluster approach to increase the effectiveness of FEZ in Uzbekistan

- International experience indicates a promising potential to generate mutually reinforcing effects between clusters and FEZ. Clusters can increase the attractiveness and impact of zones, while zones can act as a catalyst for the development of clusters
- However, those mutually reinforcing effects are not automatic:
 - A cluster-oriented approach requires a sufficient concentration of players with related activities and interests to generate synergies and spill-over effects
 - The locations and profiles of zones should be aligned to the needs of the clusters offering a favourable environment for the relevant target groups and activities
 - In addition, a number of general framework conditions are of high relevance, such as strong linkages between the government, academia and businesses as well as efficient intra-governmental coordination

Executive Summary

Considering the findings on the preconditions in Uzbekistan, the pharmaceutical industry offers the most promising potential for utilising synergies between zone and cluster development

- As indicated by its recent performance, the pharmaceutical industry has a substantial growth, investment, innovation, export and employment potential
- Uzbekistan has a strong competitive position building upon a longstanding industrial tradition
- The concentration of companies, research / educational institutions, service providers and government institutions in Tashkent and the surrounding regions offers promising conditions for the development of a cluster
- The positive cooperation climate constitutes a further advantage. Cooperative relations cover areas, such as certifications, training and technology-related aspects
- In addition, in the recent past, 8 pharmaceutical FEZ have been established with a clear target-group specific profile and focus

Executive Summary

A phased approach is recommended – with an initial focus on developing and promoting a pharma cluster comprising Tashkent and the surrounding regions / pharma zones (Bustonlik, Parkent, Sirdaryo)

- In order to fully unlock the investment and cluster potentials, it is of critical importance to develop a pharma park in Tashkent as part of the first phase
- Considering local preconditions as well as international experience, it should be assessed if the 7.5 ha site of the Serum and Vaccines Institute in Tashkent can be used for such a type of project
- The key focus of the pharma park should be on innovation-oriented projects. Furthermore, it should provide an entry platform for international investors
- The park should take over a hub function for the cluster. It should closely collaborate with the pharma zones surrounding Tashkent – e.g. with respect to expansion projects and reinvestments

Executive Summary

In addition to the development of a pharma park, the establishment of regional cluster management structures should form a key element of the first phase

- The cluster management could provide the following range of services:
 - Information and cooperation platforms (e.g. networking events)
 - Business development (e.g. trade fair visits, twinning with similar clusters abroad)
 - Skills development (e.g. tailored training programmes, job exchanges and fairs)
 - Innovation transfer (e.g. initiating collaborative innovation / R&D projects)
 - Cluster marketing (raising awareness of the cluster, investment promotion)
- It should be assessed if synergies within the institutional landscape can be utilised and international partners – in particular from the private sector – can be involved
- In the second phase, further pharma zones, companies and institutions from other parts of the countries could be integrated
- Finally, the approach could be applied to further industries depending on the results

Structure

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2. Clusters in the industrial policy context
3. FEZ in the industrial policy context
4. Synergies between clusters and FEZ
5. Assessing preconditions in Uzbekistan
6. Conclusions and recommendations

Annex 1: Cluster development in the German Capital Region

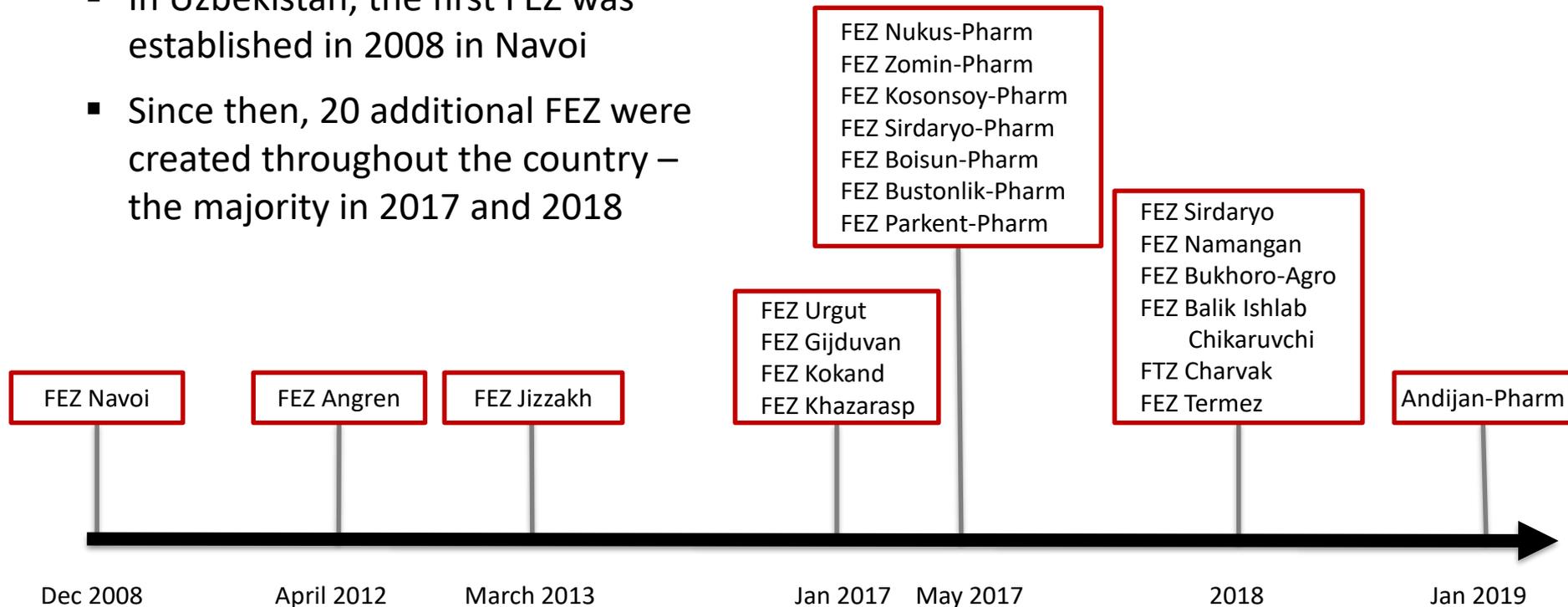
Annex 2: Collaboration between Medicon Village Park and Medicon Valley Life Science Cluster (Scandinavia)

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1. Introduction

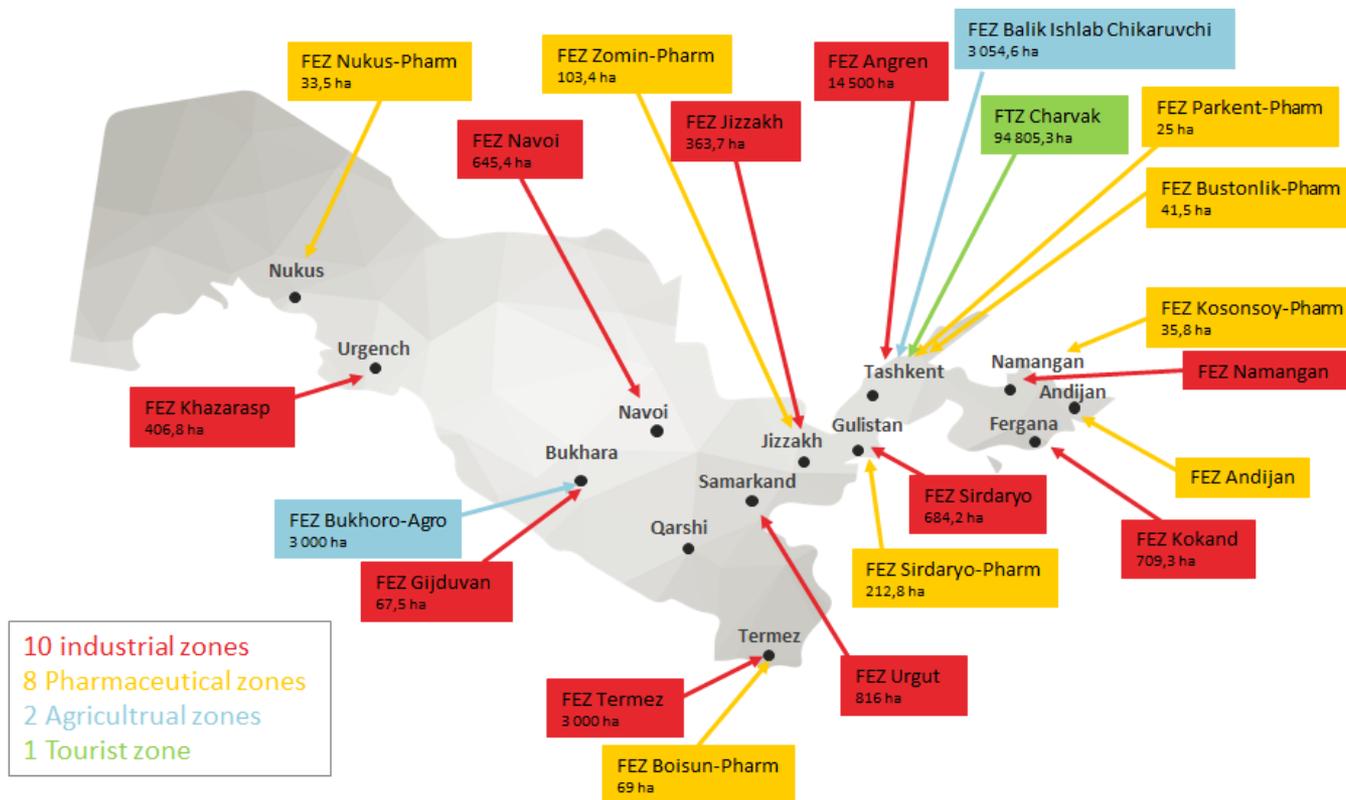
In many countries around the globe, free economic zones (FEZ) have been introduced to attract investment, foster export diversification and stimulate industrial development

- In Uzbekistan, the first FEZ was established in 2008 in Navoi
- Since then, 20 additional FEZ were created throughout the country – the majority in 2017 and 2018



1. Introduction

The FEZ vary with respect to their profile. The first FEZ covered a broad spectrum of industries. In the recent past a number of specialised zones have been established, with a focus on pharma, agriculture and tourism



1. Introduction

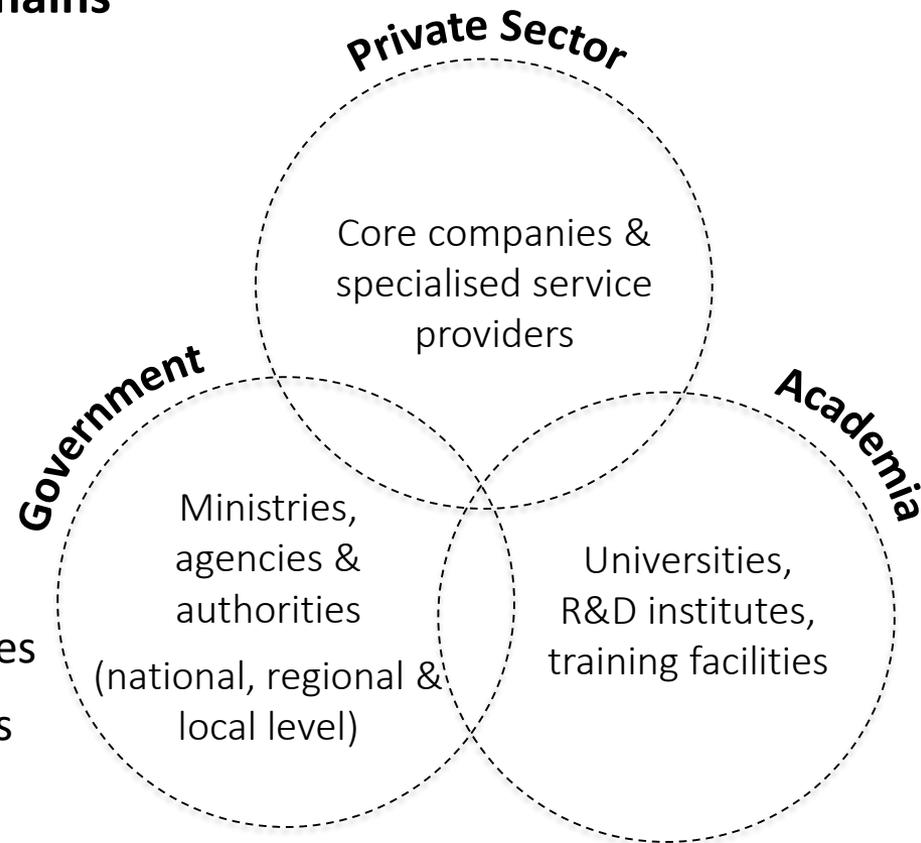
In light of recent trends at the international level, this study examines the potential for leveraging the cluster approach to increase the effectiveness of FEZ in Uzbekistan

- In the recent past, several studies have reviewed and evaluated the performance of FEZ in Uzbekistan focusing on aspects, such as the regulatory and institutional framework, administrative processes and the promotion of zones
- Drawing on the findings of those studies, a new FEZ law has been drafted at the beginning of this year
- Building upon previous studies and reforms initiated, this study reviews the FEZ and their development potential from an industrial policy perspective. It examines the potential for leveraging the cluster approach to increase the effectiveness of FEZ
- An overview of international experience in designing and implementing relevant industrial and investment policy packages forms the starting point for the assessment of preconditions in Uzbekistan. The recommendations derived are illustrated by practical examples

2. Clusters in the industrial policy context

The cluster approach plays an increasing role in the industry policy context. Clusters are geographical concentrations of interconnected companies and institutions focusing on related value chains

- Clusters are characterised by:
 - Shared interests and a variety of formal / informal relationships
 - Coopetition (co-existence of cooperation and competition)
 - Awareness beyond region
- Cluster programmes facilitate the development of clusters, e.g. with:
 - Regional cluster management structures
 - Cross-cluster coordination mechanisms
 - Alignment of related policy areas



2. Clusters in the industrial policy context

Clusters can be very helpful in order to align the different dimensions of an industrial policy

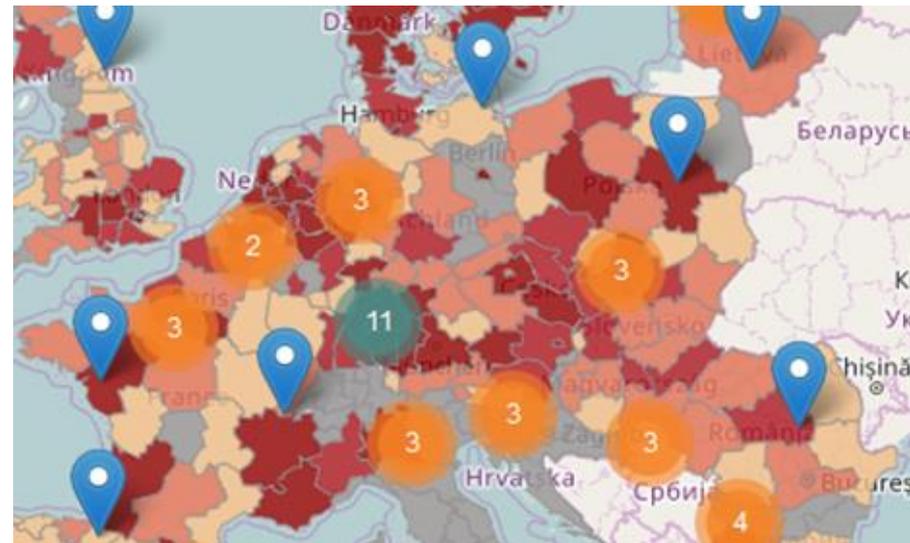
- When designing and implementing an industrial policy, a key success factor lies in balancing and aligning the horizontal, vertical and spatial dimension
 - Horizontal policy measures aim at improving the general business environment – regardless of economic sectors or territories
 - Vertical policy measures provide targeted support to specific industries or value chains in line with a country's comparative advantages
 - Spatial policy measures focus on the spatial distribution of economic activity
- Various interdependencies and synergies exist between the three dimensions
- Effective links and combinations between horizontal, vertical and spatial policy measures offer substantial benefits for industrial development
- Clusters can be very helpful in order to unlock this potential – in particular in combination with zones

2. Clusters in the industrial policy context

Based on an integrated approach, many countries focus on utilising synergies between different industrial policy measures as well as between industrial policy and related policy areas – in particular investment and innovation policy

- In the recent past, particular attention has been paid to the interface between industrial and investment policy
- Many governments have successfully leveraged clusters to increase the effectiveness of their investment attraction efforts
- The cluster approach allows to extract more value from inward investment maximising spill-over effects and stimulating industrial development
- Annex 1 outlines the cluster programme of the German Capital Region

Automotive clusters in the cluster mapping tool of the European Cluster Collaboration Platform (ECCP)



3. FEZ in the industrial policy context

Policy practice shows, that FEZ belong to the most commonly used investment policy tools in industrial development strategies

According to a recent UNCTAD analysis of investment policy measures in industrial development strategies, special zones (including FEZ) are used by approximately 80% of developed as well as developing economies

<i>Investment policy tools in industrial development strategies (since 2008), by economic grouping</i>	Policy tools		Country classification		
			Developed economies	Developing economies	LDCs
	Incentives		97%	92%	96%
	Special zones		83%	78%	92%
	Investment promotion/facilitation		67%	82%	85%
	Regulation (entry & establishment)	Liberalisation	3%	18%	17%
		Restriction	0%	5%	8%
	Performance requirements		3%	20%	25%

Source: UNCTAD, 2018

3. FEZ in the industrial policy context

While zone schemes differ between countries depending upon the economic structure, development objectives, policy and institutional framework, there are a number of common trends and widely applicable success factors

- Integration into the industrial policy framework:
 - Zones are nowadays considered an integrated policy instrument rather than a stand-alone measure
 - The target groups of the zones as well as the facilities, services and incentives reflect the objectives and focus of the industrial policy
- Role of infrastructure and services as a means of differentiation:
 - Investors are becoming more and more demanding regarding the quality of infrastructure and services of zones
 - Deficiencies in those areas can only partly be compensated by incentives
 - Attempts to alleviate regional economic disparities by setting up zones in rural or underdeveloped areas have proven inefficient in most cases

3. FEZ in the industrial policy context

While zone schemes differ between countries depending upon the economic structure, development objectives, policy and institutional framework, there are a number of common trends and widely applicable success factors (cont.)

- Linkages with the local economy:
 - Research suggests that the long-term success of zones depends on the level of integration with the local economy
 - Allowing forward and backward linkages can promote skills and technology transfer as well as the development and upgrading of value chains
- Alignment of incentive framework to strategic positioning: the incentive framework needs to be designed carefully to attract the types of activities that are desired with regard to the strategic positioning of the zone and the overall policy framework
- Involvement of private sector in zone development and management: a notable trend is the rise of private sector involvement in the development and management of zone which provides access to additional resources and expertise

4. Synergies between clusters and FEZ

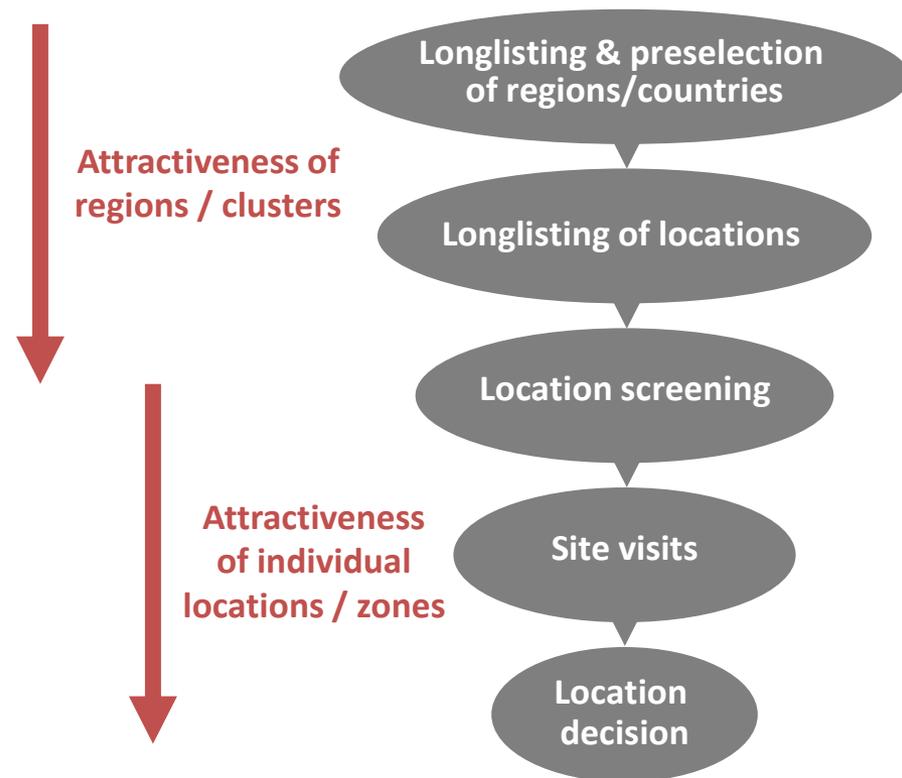
In the industrial policy context, recent experience has shown a promising potential to generate mutually reinforcing effects between clusters and FEZ

- Clusters can offer a clear profile to FEZ providing guidance for the development of purpose-built facilities and tailored services
- Spill-over effects can be maximised, e.g. with targeted interventions supporting innovation transfer, skills development and the integration into value chains
- The combination allows to use public funding more efficiently as both new investors as well as local companies can benefit from facilities and services provided
- Organisational synergies can be created – both zones and clusters offer a high potential for public private partnerships (PPP)
- Clusters can increase the attractiveness and impact of zones, while zones can act as a catalyst for the development of clusters
- However, there can be a trade-off between the integration-oriented cluster-approach and an enclave-approach still prevailing in zones with a strong focus on exports

4. Synergies between clusters and FEZ

Furthermore, the combination of clusters and zones offers considerable benefits in the context of investment promotion – allowing a convincing argumentation in line with the needs and the site selection process of investors

- Investors are not looking for locations – but for business opportunities and they typically start the site selection process at the regional level
- Clusters improve chances to get on the long-list at the beginning
- Investors believe that their needs can be met in clusters
- Zones can play an important role in the second phase
- They provide a concrete product in the cluster context



5. Assessing preconditions in Uzbekistan

However, those mutually reinforcing benefits are not automatic. There are a number of prerequisites to be considered, in particular:

- There have to be (emerging) clusters with a “critical mass”, a promising investment, innovation and employment potential
 - A cluster-oriented approach requires a sufficient concentration of players with related activities and interest to generate synergies and spill-over effects
 - A balanced mix of SMEs and large companies and an eco-system including service and training providers as well as academic institutions provide a sound basis
- The locations and profiles of zones should be aligned to the needs of the clusters offering a favourable environment for the relevant target groups and their interaction
- In addition, a number of general framework conditions are of high relevance, such as:
 - Strong linkages between the government, academia and businesses building upon a clear understanding of the cluster-rationale and division of roles
 - Efficient intra-governmental coordination and policy alignment

5. Assessing preconditions in Uzbekistan

From today's perspective, the pharmaceutical industry offers the most promising potential for leveraging clusters to increase the effectiveness of FEZ in Uzbekistan

- As indicated by its recent performance, the pharmaceutical industry has a substantial investment, innovation, export and employment potential
 - The industry comprises approximately 150 companies and 10,000 employees
 - It shows a positive investment track record with a number of planned projects (e.g. in the Parkent and Sirdaryo FEZ) – some of them involving foreign investors
- Uzbekistan has a strong competitive position building upon a longstanding industrial tradition (e.g. role of Tashkent as a regional academic and R&D centre of the pharmaceutical industry in the Soviet Union)
- Against this background, there is a comparatively high level of awareness of Uzbekistan as a location of the pharmaceutical industry

5. Assessing preconditions in Uzbekistan

From today's perspective, the pharmaceutical industry offers the most promising potential (cont.)

- The concentration of companies, research / educational institutions, service providers and government institutions in Tashkent and the surrounding regions offers promising conditions for the development of a cluster
- The positive cooperation climate constitutes a further advantage. Cooperative relations cover areas, such as:
 - Certifications
 - Trainings
 - Maintenance of equipment and technology-related aspects
- Thus, industry players are familiar with the concept of coopetition – the coexistence of competition and cooperation
- Furthermore, in the recent past, 8 pharmaceutical FEZ have been established with a clear target-group specific profile and focus

5. Assessing preconditions in Uzbekistan

At the same time, when designing policy measures it needs to be considered that the pharmaceutical industry and the relevant eco-system are still at an early stage of development

- According to the interviews, linkages between business, government and academia as well as intra-governmental need to be strengthened to unlock the cluster potential
- Furthermore, with the existing pharmaceutical zones and the facilities and services offered only part of the investment and development potentials can be tapped
 - The existing zones are suitable for manufacturing operations and related functions – in particular of domestic companies
 - However, there is no offer for more innovation-oriented projects that prefer urban locations with needs-oriented support services in proximity to research and educational institutions
 - The same applies to international investors looking for similar locations as a starting point for their operations

5. Assessing preconditions in Uzbekistan

In comparison, other FEZ (industrial, tourism and agriculture) and industries in the country offer less promising conditions for a cluster-oriented approach from today's perspective

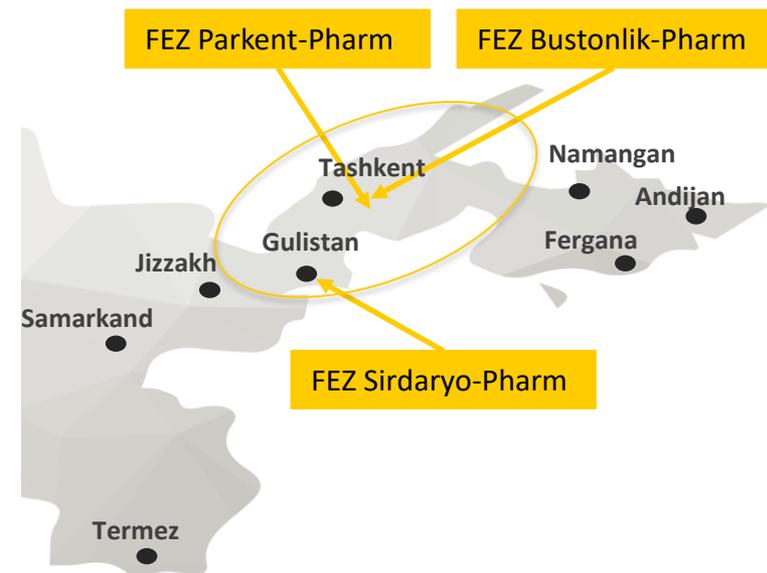
- As confirmed in the interviews, in most cases the regional concentration of companies and educational / research institutions in related value chains is too low to ...
 - Generate substantial spill-over effects
 - Attract specialised suppliers or service providers
- Overall, linkages between actors in related value chains are rather weakly developed
- Companies in the proximity are mostly perceived as competitors – and not as potential cooperation partners
- Many actors are not (fully) familiar with the cluster approach, its benefits and potentials as well as the underlying rationale

6. Conclusions and recommendations

Considering the findings from the assessment of the preconditions, the pharmaceutical industry offers the most promising potential for utilising synergies between zone and cluster development

- A phased approach is recommended for leveraging clusters to increase the effectiveness of FEZ in Uzbekistan
- The initial focus should be on developing and promoting a pharma cluster comprising Tashkent and the surrounding regions / pharma zones (Bustonlik, Parkent, Sirdaryo)
- International experience – as presented in the practical examples in annex 2 and 3 – should be taken into account when specifying the measures

Proposed first cluster-development phase



6. Conclusions and recommendations

In order to fully unlock the investment and cluster potentials, it is of critical importance to develop a pharma park in Tashkent as part of the first phase

- Considering local preconditions as well as international experience, it should be assessed if the 7.5 ha site of the Serum and Vaccines Institute in Tashkent can be used for such a type of project
- The key focus of the pharma park should be on innovation-oriented projects. Furthermore, it should provide an entry platform for international investors
- The park should take over a hub function for the cluster
 - The park should also comprise training as well as conference / meeting facilities to support networking activities amongst cluster actors
 - It should closely collaborate with the pharma zones surrounding Tashkent – e.g. to cater for expansions

Site of the Serum and Vaccines Institute in Tashkent



6. Conclusions and recommendations

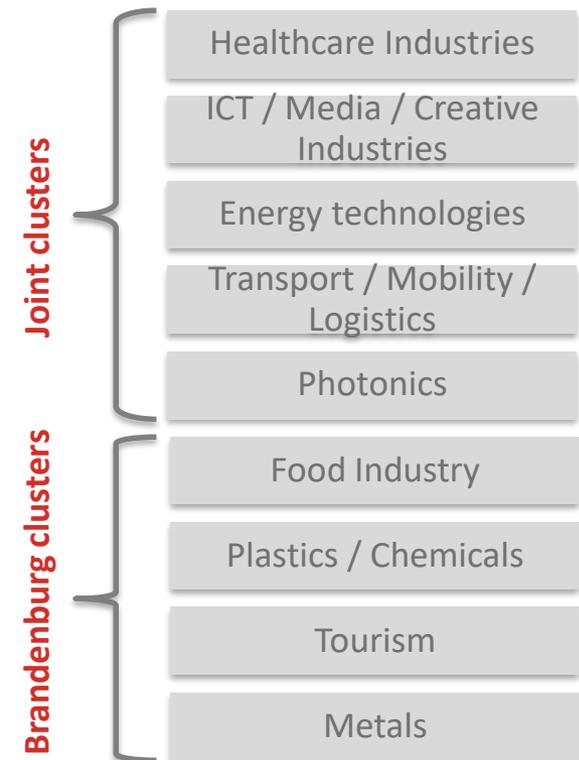
Furthermore, as part of the first phase, a cluster management structure should be established integrating actors from government, academia and businesses

- Taking into account international good practice, as illustrated in the examples in the annex, the cluster management should provide the following range of services:
 - Information and cooperation platforms (e.g. networking events)
 - Business development (e.g. trade fair visits, twinning with similar clusters abroad)
 - Skills development (e.g. tailored training programmes, job exchanges and fairs)
 - Innovation transfer (e.g. initiating collaborative innovation / R&D projects)
 - Cluster marketing (raising awareness of the cluster, investment promotion)
- It should be assessed if synergies within the institutional landscape can be utilised (e.g. combining park and cluster management functions) and international partners – in particular from the private sector – can be involved
- In the second phase, further pharma zones, companies and institutions from other parts of the countries could be integrated. Finally, the approach could be applied to further industries depending on the results

Annex 1: Cluster development in the German Capital Region

The innovation policy of the German Capital Region defines clusters for the Federal States of Berlin and Brandenburg. It forms the base for the industrial policies and investment attraction efforts of both federal states

- The policy aims at ensuring that resources go towards strengthening the clusters with the highest potential
- Joint clusters have been defined due to the strong linkages between the two states of the capital region
- The clusters have been defined based on
 - Critical mass
 - Level of cooperation and willingness to cooperate
 - Potential for dynamic growth
 - Supra-regional and international orientation
- Due to the structural differences between the two states, Brandenburg has defined additional clusters



Annex 1: Cluster development in the German Capital Region

In close collaboration with the stakeholders, a masterplan and regional cluster management structures have been developed for each cluster

- The masterplans cover:
 - Analysis of the cluster and development potential
 - Vision and objectives
 - Priority actions (e.g. in the areas industrial infrastructure, innovation, skills development, value chain upgrading, investment promotion)
- The cluster management has been taken over by the investment promotion agencies of the two states, comprising the following tasks:
 - Coordinating the implementation of priority actions
 - Organising networking platforms for stakeholders
 - Promoting the clusters

Masterplan Healthcare Industries



Annex 2: Collaboration between Medicon Village Park and Medicon Valley Life Science Cluster (Scandinavia)

The close collaboration between the Medicon Village Park in Sweden and the bi-national Medicon Valley Life Science Cluster demonstrates how mutually reinforcing effects between zones and clusters can be generated

- Medicon Village Park, founded in 2011, offers a unique environment for over 140 life sciences companies and research institutions with more than 1,800 employees
- Currently, residents are using 80,000 m². The constantly growing demand for further space led to the construction of a new building with 17,000 m², opening in July 2019
- The park offers a target-group oriented infrastructure comprising fully equipped labs, conference rooms, reception services, sport and leisure facilities as well as a range of networking / business support services
- Residents include the University of Lund and the regional Healthcare Authority, next to international investors, such as Thermo Fisher, start-ups and SMEs

Expansion of the Medicon Village Park



Annex 2: Collaboration between Medicon Village Park and Medicon Valley Life Science Cluster (Scandinavia)

In close collaboration with the bi-national Medicon Valley Life Science Cluster, the park fosters innovation transfer and networking as a strategic goal

- Amongst others, the park closely cooperates with the cluster in areas such as the organisation of networking events, trainings, conferences, joint innovation projects and incubation
- Furthermore, as part of a twin-cluster initiative, Medicon Village Park cooperates with clusters from Switzerland, Belgium, Wales and Canada
- The cooperation comprises soft-landing schemes, programmes for PhD students and joint R&D projects involving companies as well as research institutions

Medicon Valley Life Science Cluster

- The bi-national cluster comprises the regions of Copenhagen (Denmark), Lund and Malmö (Sweden)
- Over 350 biotech, medtech and pharma companies with 40,000 employees as well as 3 universities, 11 hospitals and further research institutions are cooperating in the cluster



Conference room and facilities at Medicon Village Park



Annex 3: Cluster development activities of the Coyol Free Zone (Costa Rica)

The management of the multiple award winning Coyol Free Zone (Costa Rica) is initiating and coordinating a range of activities and projects fostering the development of a life science cluster

- On an area of approximately 100 ha, the Coyol Free Zone hosts the operations of 27 companies with 13,000 employees, mostly from the medical device sector
- Amongst others, the zone attracted the investors Philips (2010), CooperVision (2013), CooperSurgical (2017), Medtronic (2018) and Thermofisher (2018)
- Investors benefit from tax incentives and a life-sciences oriented infrastructure with purpose-built facilities and laboratory services
- A common central building (Centro Coyol) offers conference and meeting rooms as wells as educational, social and medical facilities

Facilities at Coyol Free Zone



Annex 3: Cluster development activities of the Coyol Free Zone (Costa Rica)

Cluster-related activities of the zone management focus in particular on the areas investment promotion, innovation transfer and skills development

- Investment promotion efforts of the zone management focus on specific value chains, e.g. targeting specialised suppliers or logistics companies
- Strategic alliances with different universities, research, innovation and training institutions have been initiated
- Amongst others, as part of a collaboration with the Tecnológico de Costa Rica, a range of Master's degree programmes (e.g. medical engineering, supply chain management) as well as training courses (e.g. quality management, CAD and logistics) are offered in the zone
- Innovation labs, job fairs and recruitment platforms constitute further collaborative measures initiated by the zone management

Attracted supplier in the zone



Cooperation with Tecnológico de Costa Rica at Centro Coyol



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