



# GROWING TOGETHER

ALMATY-BISHKEK  
CORRIDOR INITIATIVE  
INVESTMENT FRAMEWORK





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## **ALMATY–BISHKEK CORRIDOR INITIATIVE INVESTMENT FRAMEWORK**

October 2016



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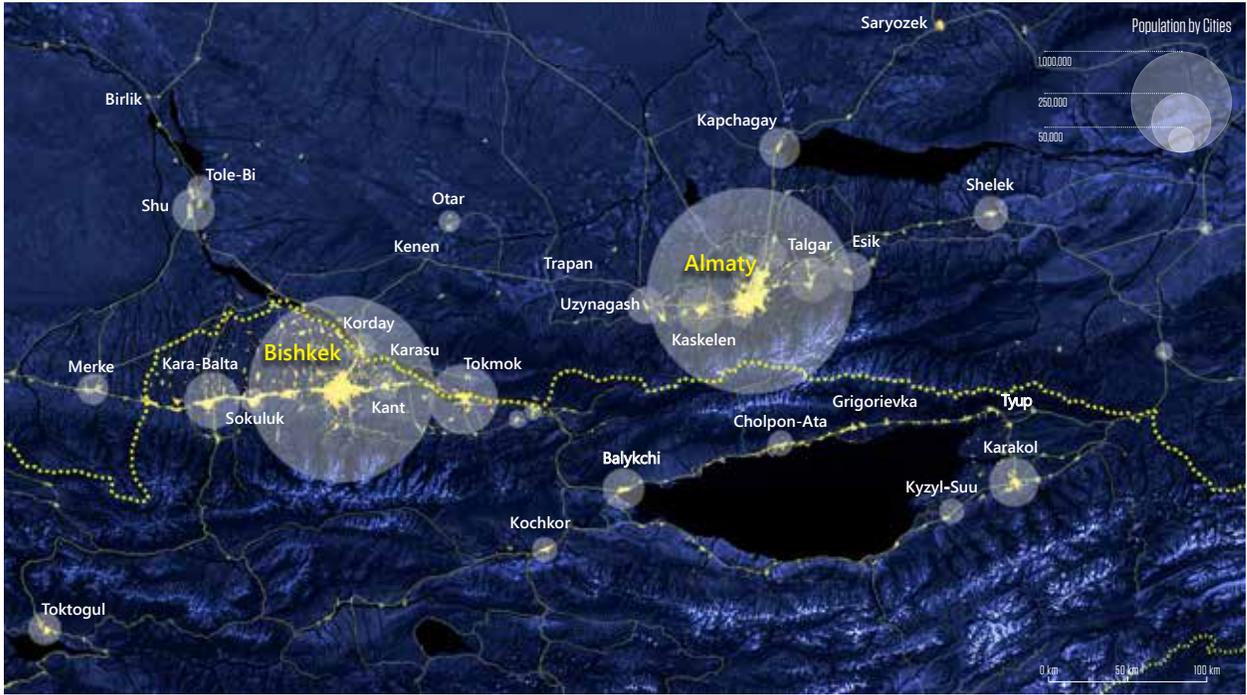
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### Urban System of the Corridor



Source: Cities Lab S. L.

## ABBREVIATIONS

ABCI	–	Almaty–Bishkek Corridor Initiative
ASEAN	–	Association of Southeast Asian Nations
CAREC	–	Central Asia Regional Economic Cooperation
EEU	–	Eurasian Economic Union
ICT	–	information and communications technology
IF-IP	–	investment framework implementation plan
PPP	–	public–private cooperation
SEZ	–	special economic zone
TVET	–	technical vocational education and training

### NOTE

In this report, “\$” refers to US dollars.

## Foreword

This report discusses the strategic agenda for developing the Almaty–Bishkek Economic Corridor, as well as the comprehensive framework of investments needed encompassing policy reforms, regulatory coordination, physical infrastructure, capacity building, and institutional development. The report recognizes but does not explicitly address the political investment that the two countries need, including high level political sensitivity, to create the corridor, which will ultimately be the decisive investment for this vision of future growth of the region.

The report is based on analytical work that was monitored and reviewed by the Joint Working Group, which was established by the two governments following a memorandum of understanding between the mayors of Almaty and Bishkek. The group comprises representatives of the city governments and national governments, and is led by the ministries of economy from both countries. The group has had four meetings to date, and has reviewed work in agriculture and agribusiness, advanced education, advanced health services, tourism, disaster risk management, information and communications technology, high-speed transport, and urban development and management.

## Acknowledgments

The Almaty–Bishkek Corridor Initiative Investment Framework is based on in-depth reports that were prepared by a team of officials from national, provincial and city governments, both from Kazakhstan and the Kyrgyz Republic, as well as by Asian Development Bank (ADB) staff and external experts, together forming the Joint Working Group.

The work was guided by the Steering Committee, which is headed by the vice-ministers of Economy of Kazakhstan and the Kyrgyz Republic and consists of deputy mayors and governors of Almaty, Bishkek, and surrounding oblasts.

The Committee is co-chaired by Timur Zhaxylykov, vice-minister of National Economy and Almaz Sazbakov, deputy minister of Economy. Members from Kazakhstan are Rumil Taufikov, deputy mayor of Almaty City; Almas Baitenov, deputy director of Budget Investment and PPP Development Department of the Ministry of National Economy (MNE); Dauren Zhambaibek, deputy director of the Regional Policy Department of MNE; Serik Turdaliyev, deputy mayor of Almaty Region; Timur Zhanke, deputy mayor of Zhambyl Region; Maxat Kikimov, director of Economy and Budget Planning Division of Almaty City; Timur Duysengaliyev, director of Tourism and External Relations Division of Almaty City; and Aidos Zhexenbay, deputy chair of the Board, JSC “Almaty City Development Center”. Members from Kyrgyz Republic are Alymbek Orozbekov, director of Investment Promotion Agency under the Ministry of Economy (MOE); Ernis Zarlykov, first vice-mayor of Bishkek; Damir Monoldorov, first-deputy government representative in Issyk-Kul Region; Baktybek Orozbaev, head of the Government Representative’s Office in Chuy Region; Kanat Abdrahmanov, head of Investment and PPP Department in MOE; Atambek Botoev, head of Processing Industry and Agro-marketing Department, Ministry of Agriculture and Melioration; Azamat Usubaliyev, director of Bishkek City Development Agency; Askhat Tuleberdiev, first deputy of the Chief Architect of Bishkek; Rashid Ibragimov, head of Economy and Municipal Property Department of Bishkek Mayor’s Office; and Nur Aitmatov, principal expert of International Cooperation Department in Bishkek Mayor’s Office.

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# I. Sustaining Economic Growth In The 21st Century

## A. A New Vision

The Almaty–Bishkek Corridor Initiative (ABCI) is a bold vision to crystallize future drivers of sustainable growth for a spatially and economically integrated Almaty–Bishkek region across Kazakhstan and the Kyrgyz Republic. The integrated Almaty–Bishkek region, also known as the Almaty–Bishkek Economic Corridor, is envisaged as a major regional economy in Central Asia anchored on export-oriented, knowledge-intensive, and creative services as a key growth driver, complemented by more conventional but modernized drivers like agribusiness and tourism. The region is defined here not in administrative terms but as an economic entity, encompassing these two major cities as well as their respective rural hinterlands and economically-linked urban centers, including Lake Issyk-Kul. Development of the corridor is expected to last 10–15 years.

## B. Challenges

Achieving the ABCI vision will be challenging. First, the vision is based on cross-border integration of cities in two different countries, and few successful instances of this exist outside of the European Union. For the ABCI to succeed, political cooperation of the highest order between the two national governments and both city administrations is key, involving sustained commitment. Second, the corridor's success rests on sustained ignition of economic activity from private investment, but private investment has been difficult to spur in the region. However, the ABCI is proposing a framework for policy reforms and targeted public investments to attract the requisite private sector participation, including in part through public–private partnerships (PPPs).

### Box: The Almaty–Bishkek Economic Corridor in 2030

The Almaty–Bishkek Economic Corridor is envisioned to be an integrated, dynamic, and diversified economic region, driven by export-oriented activities, focused on knowledge-intensive services, agribusiness, and tourism. Light and select other manufacturing is also encouraged without necessarily expected to be export-based growth drivers.

By 2030, the corridor will consist of two dense urban agglomerations, Almaty and Bishkek, within a functionally diverse region. The two cities will integrate wide areas of tradable economic activities such as advanced health and tertiary education services, logistics and transport services, and other information and communications technology (ICT) and knowledge-based services, as well as agribusiness. Apart from the two growth nodes, smaller cities and rural areas will be linked by effective transport solutions and ICT infrastructure, allowing them to benefit through agribusiness development, food processing, and improved access to private and public goods and services.

The corridor will synergize the comparative advantages of the two cities and surrounding regions, and integrate them into one economic space that exploits agglomeration, scale, and specialization benefits to compete with other regional and international centers of economic activity in the Eurasian Economic Union and beyond. Tight connectivity and spatial coordination will integrate the corridor; advanced knowledge and technology will be applied for commercial use through improved links between universities and industry, which in turn will inform the development of human skills. Infrastructure in the form of a high-speed rail linking Almaty and Bishkek into a daily-commuting relationship and an improved network of rural roads will provide spatial integration. Further, a rich, cooperative ecosystem of knowledge, institutions, and investments sustaining the growing needs of the corridor will rest on partnerships of the private sector, governments, and international institutions.

Third, creating a knowledge-based economy is complex, requiring, for example, commercialization of knowledge by integrating its flow between universities and industry. Fourth, implementing the ABCI also requires addressing a host of regulatory, administrative, and institutional complexities for coordination. Different levels of the governments and several agencies at each level need to be harnessed into a coordinated unity for effective implementation. Finally, the ABCI vision relies on creating dense agglomerations in an area of low economic concentration and specialization.

### C. Countervailing Forces

While these challenges are substantial, more important forces are making the ABCI vision not only more attractive and achievable but inevitable over time. Both Kazakhstan and the Kyrgyz Republic are members of the Eurasian Economic Union (EEU), which is committed to the creation of a common economic space among its member countries. An associated customs union, the Eurasian Customs Union, has already led to elimination of border customs controls between the two countries, and over the next decade, EEU member countries will be focusing on establishing comprehensive integration in a wide variety of areas (to facilitate seamless movement of people, goods, and services within the union, including foreign direct investment, competition policy, subsidies, and market access). Indeed, the ABCI allows Kazakhstan and the Kyrgyz Republic to complement these top-down initiatives with bottom-up measures and investments to better exploit new opportunities opened up by the larger EEU market.

Almaty and Bishkek have enjoyed positive economic growth rates since independence from the Soviet Union, but this growth is not sustainable with their business-as-usual models. Both cities are overwhelmingly services-dominated (i.e., retail and wholesale trade, logistics, and finance), yet these services are not exported directly to external markets. Instead, to varying degrees, they cater to domestic markets that are based on energy and commodity exports; thus, a drop in export

revenues will affect the market for nontradable services in both cities. Further, a major impetus to Bishkek's economy has been the garment and retail trade in Dordoï market, which is now virtually extinct due to the elimination of arbitrage across trading regimes since the Kyrgyz Republic joined the EEU. It is vital now that each city finds new drivers of growth.

While both countries have had aspirations in the manufacturing sector, the export-led manufacturing growth model seen in East and Southeast Asia might not be useful going forward. The relevance of this model to Central Asia was always doubtful, given the high impact of physical distance of the area on trade. Further, the model itself is now under increasing scrutiny due to changes in the global economy arising from technological innovation, entrenched networks of producers and suppliers, and related factors. Instead, experience with special economic zones (SEZs) across Central Asia demonstrates that the likely growth drivers for Central Asian economies, including Almaty and Bishkek, in the emerging global context may lie more in services and even agriculture than in export-led, labor-intensive manufacturing. It is becoming more clear that tomorrow's growth will increasingly be based on skilled—not cheap—labor.

Moreover, the emphasis on promoting a knowledge-based and creative services economy, also featuring agriculture and tourism, is consistent with the priorities of both governments. The role of economies of scale and agglomeration economies in modern economic activities is also increasingly being recognized, and this applies even more so in the context of the proposed growth drivers of the ABCI (i.e., knowledge-based services as well as agribusiness and tourism). Whatever success each city can attempt for its development toward these areas can be done more effectively by joining efforts with the other city by expanding the potential for scale and agglomeration effects.

Finally, developing the ABCI vision will provide each city with a commitment to undertake necessary structural adjustments for development that may be unpopular with domestic stakeholders.

#### D. Necessary Investments

**Skills.** Tradable, sophisticated services depend on human capital. Countries within and beyond the ABCI region compete to attract, for example, the best physicians, professors, actuaries, process engineers, and supply-chain managers. As salaries for such job groups are determined internationally, other factors like quality of life, provision of public services, and opportunities within a particular economic space play a major role in attracting these skills in high demand. Another important factor is the skills base available locally. Without coordination through the ABCI, Almaty and Bishkek are both competing to attract people with advanced skills in the locally available skills base. An integrated economic space, however, would create a larger skills base, resulting in more specialization and fewer mismatches, more opportunities for services providers through the common market, and an increased magnitude compared to other economic centers in the EEU and Central Asia Regional Economic Cooperation (CAREC) region.

**Infrastructure.** Infrastructure investments are required to facilitate the integration of the economic space between Almaty and Bishkek, and to drive economic development through concentration of economic activity. The denser the economic space, the more

attractive it will be for investors and services providers, resulting in more concentration. Urban management must anticipate these developments to allow for an effective, efficient integration. Urban transport, efficient land-use planning, and functional transformation of different parts of the corridor are required to integrate public and private services as well as agricultural production and processing.

**Institutions.** Despite the relatively short distance between Almaty and Bishkek, the economic activity between the two cities falls far behind a scenario in which both cities are in the same country. Indeed, EEU integration is proceeding well and will help accelerate the harmonization of standards and requirements for economic cooperation between the two cities. To meaningfully implement these high-level policies, however, a detailed sector approach is needed to exploit this new regulatory environment to the benefit of the ABCI region. To enable free, safe cross-border trade of services and goods, both countries need to coordinate the requirements, with each specializing in different subsectors or categories. Finally, above all, sustained growth requires a dynamic private sector; hence, government and city administrations must be willing to transform policies and institutions to create a supporting environment.

## II. Strategy

### A. Growing Economic Density through Agglomeration

The strategy proposed for development of the corridor hinges on increasing the economic size and dynamism of Almaty and Bishkek along with the spatial integration of their surrounding areas. The strategy builds on existing attributes of the two anchor cities and identifies directions for developing the new growth drivers for the region. It suggests developing a comparative advantage in existing areas of relevance to the Almaty–Bishkek region, such as agribusiness and tourism, as well as developing new capabilities in services that are knowledge- and information and communications technology (ICT)-based and easily tradable, with an initial focus on health and education services as foundational elements of developing more skills-intensive services exports. Agricultural productivity, tourism, and some manufacturing can also make important contributions to generating growth in other parts of the region.

A focus on export-oriented, knowledge-driven services entails raising productivity through exploiting agglomeration economies from increased scale and specialization. Improving the policy and regulatory environment for businesses, and making the two anchor cities more attractive for skilled labor and private investment, are the other two central pillars of the strategy.

This strategy is based on achieving

- (i) denser agglomeration in the two cities, which is critical to services that often have to be close to clients;
- (ii) spatial design to integrate the cities better with economic activities surrounding them;
- (iii) improved infrastructure linkages (i.e., energy, transport, and ICT) to reduce economic distance and to facilitate exchange, cooperation, and specialization;
- (iv) freedom of movement of labor and capital (which already exists in principle, but is subject to further enhancement depending on sector and soft trade barriers); and
- (v) competing as one integrated economic space with other big economic areas in the CAREC region, EEU, and beyond.

Building these linkages thus lies at the heart of design of the corridor, featuring

- (i) **Exchanges of services, public and private, between the cities and the corridor.** These will include those in education, training, health, agriculture services, logistics, tourism, services linked to city planning, and environmental services.
- (ii) **Physical.** These includes infrastructure, energy, road and rail, air, and telecommunications;
- (iii) **Knowledge and technology.** These will enable the production of both goods and services to move up the value chain for domestic consumption and for exports;
- (iv) **Private sector investments.** The focus will be on new production of goods and services; and

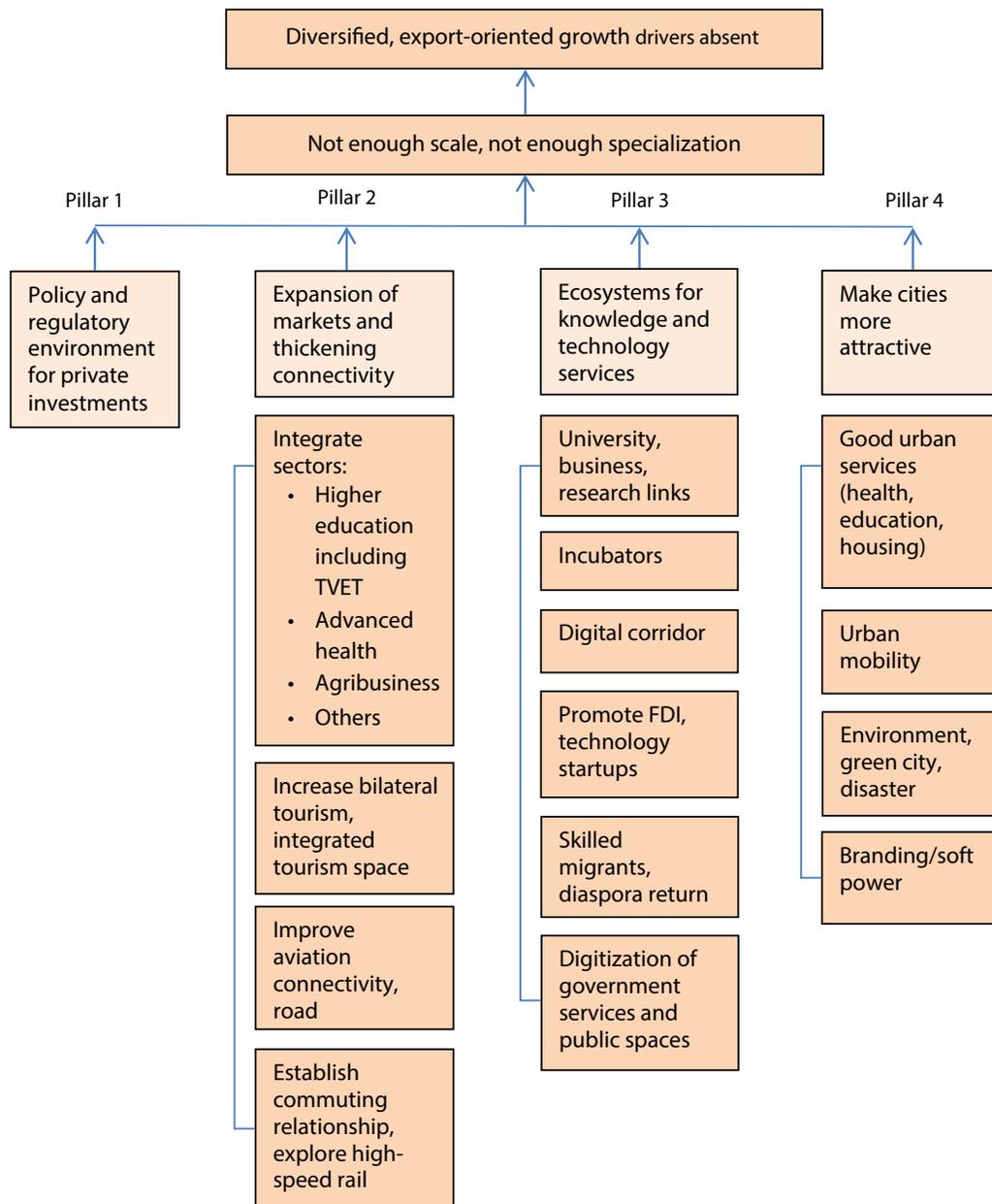
Spatially, the corridor strategy covers both anchor cities as well as surrounding geographical areas linked economically to Almaty or Bishkek. The connectivity bindings of the corridor will be built from physical and knowledge linkages.

### B. Visualizing the Strategy

The analytical structure of the strategy is provided in the figure, using a problem and solution chart. The four thrust areas or pillars are aimed at making the two cities the choice destination for private firms operating in the target areas of export-oriented knowledge and skills-intensive services.

To increase the number of firms in the ABCI region, the cities must ensure that (i) they have the right regulatory and policy environments to attract businesses; (ii) they offer a large market through integration to capture agglomeration benefits, increased specialization, and scale; (iii) they offer private investors a diverse, deep ecosystem appropriate for skills and knowledge-intensive services development; and (iv) the cities are individually and collectively attractive places

### Problem and Solution Tree Chart



to live, including for highly educated, globally skilled, and economically active households.

Analytical work under the ABCI has focused primarily on pillars 2–4. The first pillar, promoting a business friendly policy and regulatory environment, is well known from several other sources (e.g., business climate surveys), and is also addressed by multilateral institutions in their regular program-lending operations to member countries. While this report provides references to some of the policy and regulatory issues in pillar 1, its focus is, however, on the remaining three pillars.

Certainly, pillar 4, making cities individually and jointly attractive, is an especially broad agenda, many of whose elements lie within the scope of an individual city’s actions while others can benefit from coordination and cooperation. Even within the scope of individual city actions, each city needs to remember that the other is its only neighborhood. Thus, all else being equal, each city will be more attractive to private investment if the neighborhood is also attractive. Conversely, negative attributes of the neighboring city may lower the potential attractiveness of the other city by lowering

choices for tourism, leisure, and other lifestyle factors. Thus, pillar 4 moves the conversation forward on intercity cooperation but requires considerable more development as corridor design work advances.<sup>1</sup>

The pillars have interconnections through the spillover of effects. For example, the development of a digitally supported economic corridor will affect the integration and efficiency at sector levels in pillar 2 while also having an impact on the attractiveness of the cities. Similarly, the integration of higher education services will influence the ability of the region to develop a rich ecosystem for dynamic growth of knowledge and skills-intensive industries.

The key interactions of the pillars can best be seen through three lenses: (i) the role of cities in powering growth, (ii) rising growth within the corridor in response, and (iii) the connectivity required to bind the corridor together.

### C. Focusing on Cities to Power Growth and Trade<sup>2</sup>

Economic activity is more efficient in cities because of their concentration of knowledge, skills, and technology, and this concentration lowers the transaction costs of trade and cooperation in these areas, generates new activities, and creates new demands. Cities typically are also services-intensive. Financial and legal services coexist with commerce and trade; logistics and planning; architecture and environmental services; services common to the public and private sectors (e.g., education, health, clean water, and waste disposal); general and highly specialized services in medicine, transport, food, and catering; ICT; and management. In cities, knowledge is created, sold, and traded. Herein lies the value created by agglomeration.

Agglomeration effects also depend on knowledge spillovers, technology, and interdependence. They promote the sharing of inputs and higher specialization, migration of labor to labor-abundant areas to widen the skills range available to firms and prospects of successful job searches, and learning spillovers. For example, an environmental services firm or an architectural firm benefits from agglomeration effects arising from co-location in a city with tertiary education establishments, as well as nearby manufacturing plants, banks, and capital markets. Two effects arise: (i) a wide range of specialized products, services, and skills are in demand; hence, these activities become profitable; and (ii) diversity in economic activities stimulates the uptake of existing technologies, fostering innovation. From a policy perspective, keeping exportability of these services as a target ensures an effective benchmark for measuring the impact of government initiatives on economic productivity.

The size of cities is affected by the trade-offs between advantages of bigger economic size (and agglomeration benefits) against greater congestion costs (i.e., prices of fixed factors such as land, pollution, and traffic). On a global scale, Almaty and Bishkek are both intermediate cities<sup>3</sup> whose future trajectories depend on careful management between agglomeration benefits and congestion costs. Intermediate cities can be attractive for investment, as the price of labor, services, land, and tax rates are usually lower than in megacities. Moreover, housing and transport costs are less, and there is less congestion, leading to reduced travel times within the urban area, better public safety, and a better quality of life.

Services-driven urban growth requires high-quality infrastructure and connectivity, and ties to the global economy, human capital, and openness to trade in services, including tourism and higher education. The advantage that

<sup>1</sup> Note that the ABCI does not preclude the selective use of SEZs or industrial parks, although it does recognize the limited success of this approach in Kazakhstan and the Kyrgyz Republic. More importantly, the strategy rests on the premise that individual SEZs and industrial parks are too small to generate agglomeration benefits. Cities capture agglomeration benefits through a sound approach to land-use planning and an appropriate policy environment for whole-city regions. A few disconnected SEZs and industrial parks cannot substitute for a wider area to generate the requisite agglomeration of economic activities. SEZs and industrial parks could, however, selectively complement the good policies and business environment in attractive cities.

<sup>2</sup> A portrait of the two cities can be found in Appendix 1.

<sup>3</sup> Megacities are those with a population in excess of 10 million, while intermediate cities are those with 150,000 to 5 million inhabitants.

these two cities will enjoy through a spatially integrated polycentric approach is economies of scale and specialization beyond what each city can do alone. The integrated approach will concentrate economic activities and thus build economic density, stimulating specialization leading to productivity gains.

#### **D. Rising Growth within the Corridor<sup>4</sup>**

Growth dynamism of the two anchor cities will help pull the broader economic corridor into rising production. Spatially integrative infrastructure over time will reduce economic distances, complemented by liberal migration policies; labor mobility will then facilitate urban growth but also raise labor skills and productivity in the region. Through improved transport, and hence falling transport prices, economic distances will decrease. Specialization in the cities will encourage services growth within the region, along with manufacturing, agriculture and agribusiness, logistics, and trade activities. Domestic and foreign tourism will occur in both cities and the broader regions. Regulatory and financial liberalization will encourage the free flow of capital into the corridor as an integral element of a common economic space between Almaty and Bishkek. Finally, SEZs and industrial parks could, in the longer term, facilitate such activities in the hinterland and in the corridor.

Smaller cities in the corridor are expected to be more dependent on manufacturing industries, particularly light industries such as food and textiles, but as they grow, they may expand more into services. The spatial clustering in the corridor will likely intensify as the region's economy grows, but agriculture production will disperse with rising income as the demand for food and agribusiness products rises with the urban population, and farms will use new land to exploit the scale of production.

The strategy for fostering growth within the corridor is to encourage these forces, knitting together the cities and region. Moreover, connections to regional or global markets will generate the economic growth and jobs that

the corridor encourages. Hence, barriers to market entry and gaps in connectivity must be identified. Regulatory or policy deficiencies that obstruct integration into regional or global markets also need to be addressed.

#### **E. Tight Connectivity Binds the Corridor Economy Together**

Critical to the success of the corridor is the connectivity strategy, which includes a digital economy and joint approaches to building infrastructure.

The corridor will rely upon a sophisticated structure for ICT that will boost private sector activity by reducing ICT costs and also underpin activities such as intercity communications, trading, and regional cooperation. Thus, the corridor will be developed as a digitally supported economy, utilizing global best practices by addressing constraints such as lack of access to the right information and lack of multisector coordination for seamless services delivery. Clearly, a high degree of regional cooperation is necessary; for example, the sharing of digital infrastructure and developing common approaches to e-governance between the two cities and throughout the corridor are vital.

Further, a profitable spatial concentration of production in the corridor, often at great distances from ultimate users of outputs, requires a lowering of transport costs. The strategy for achieving this goal must make market structures in transport truly competitive and traded across the border, as well as improve trade facilitation and cross-border cooperation. These reforms are as important as the quality of physical infrastructure. An integrated corridor needs not just behind-the-border reforms but also an alignment of policies and regulations affecting the business environment, property rights, taxes, conditions for foreign direct investment, and rules of operation in SEZs so that a truly unified economic space in the corridor is created.

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<sup>4</sup> A portrait of the area within the corridor is presented in Appendix 2.

### III. Actions: Policies Investments, Institutions

This section presents a brief profile of projects and initiatives identified by sector analysis and other studies under ABCI as necessary to realize the vision of the corridor. These include policy and institutional initiatives as well as investment projects; the projects and initiatives are “additional” to the existing and proposed investment plans of the two cities and governments. While the sector studies underlying ABCI analysis provide more details on the issues and the proposals for projects and initiatives, the description here kept high-level and brief for the purposes of the Investment Framework. This is sufficient to provide a detailed conceptual development plan for the economic corridor. Further elaboration of the discussion here can be found in Appendix 3 and in the detailed studies that are available separately.

Development of an economic corridor is a process, not an event. The actions necessary to create the corridor are envisaged as stretching over a roughly 10-year period, comprising policy initiatives, infrastructure and other investments, institutional developments, and further knowledge inputs. They are presented here grouped into four branches, which should not be viewed as exhaustive but as a substantive start to the development of the corridor and as providing a good representation of the scope of efforts entailed in broadening the integration of the ABCI region into other areas of economic activities not covered by the ABCI analyses to date.

#### Branch 1: The Business Environment

A business-friendly environment is prerequisite to attracting private investment. As noted, ABCI analysis did not focus on the policy and regulatory environment for business since it is well known from other sources and is regularly addressed by multilateral institutions.

##### Actions.

- (i) Remove major barriers to entrepreneurship and investment by establishing high-quality private and public services for businesses, specifically manufacturing, involving

logistics, concentration of businesses, and business support services.

- (ii) Implement uniform regulations and standards throughout the corridor, with joint agencies.

##### Manufacturing and special economic zones.

Although not a major activity today, the scope for manufacturing will rise through the Eurasian Customs Union and resulting displacement of imports. Greater attention to spatial factors for growth, which will enable improvements in urban services that benefit manufacturing (e.g., engineering, environment services, finance and trade, and logistics) and scale economies that could arise from a unified customs union market will create new opportunities. The strategy centers on improvements in the business and investment climate based on regulatory barriers related to standards, inputs and markets, connectivity and infrastructure, and prospects for technology absorption.

A well-designed, close partnership between the private and public sector to identify critical missing infrastructure, attract external investments and technologies, and change laws and regulations will be necessary.

##### Actions.

- (i) Develop a strategy for creating links with applied research, technology absorption, and commercialization of new technology.
- (ii) Develop a strategy for attracting foreign direct investment.

#### Branch 2: Expand Markets and Thicken Connectivity

Integration at sector level is proposed for selected sectors: agriculture and agribusiness (to increase bilateral trade and generate scale economies); advanced health services (to increase market size and specialization, boosting bilateral and wider trade), and tourism (increase bilateral trade, expand product range, exploit scale economies). These sectors have been analyzed under ABCI (and separate

reports are available), but the integration would benefit other areas of these services-dominated economies.

Integration would require policies to be adjusted in both countries and would require investments in connectivity to reduce economic distances.

**Agriculture and agribusiness.** Agriculture and agribusiness have potential for exports and growth due to easier access to the EEU market, rising incomes, and changes in dietary preferences in surrounding regions of the People's Republic of China and South Asia. EEU integration will help the agriculture sector harmonize standards, foster trade, and level prices. Since the region will be able to compete with other economic spaces in the EEU, identification of comparative advantages and exploitation and coordination of these are critical.

The region is characterized by two distinct food value chains: (i) dairy, meat, and livestock; and (ii) vegetables and food processing. Interface between the two markets is far below potential, and gains can occur from exploiting scale. Net private and public investments are needed, as well as the adoption of modern techniques and ICT. Linkages to regional and global value chains will drive growth and efficiency gains. With rising production, new opportunities will emerge in processing with significant value added (e.g., in dairy products) and in off-farm activity, such as logistics, warehousing, transport, and a range of supporting services including finance.

The strategy consists of unifying existing value chains within the corridor to raise efficiency, stimulate production, and improve profitability, eventually raising quality to international standards to access new export markets. Integral to the strategy is reliance on ICT to help boost productivity, output, and exports.

The key constraints toward developing a unified value chain relate to inadequacies in connectivity; impediments to mobility of goods, services, value-chain players, finance, and inputs that constrain value-chain interface; and external risks. Factors behind poor connectivity are farm fragmentation, paucity in value-chain financing, and poor trade and logistics hubs. Weak interface arises from severe inadequacies

in veterinary and food safety quality, inadequate infrastructure, and poor trade facilitation.

#### **Actions.**

- (i) Integrate the value chains through a composite set of strategic hard and soft infrastructure directed at stimulating the private sector.
- (ii) Focus on quality and safety, as no exports are possible without investments, physical and institutional, in these areas.
- (iii) Encourage PPPs, with the governments' contribution being long-term land leases, and smart but timebound and transparently applied subsidies and exemptions.
- (iv) Conduct due diligence research on end-markets, and finance research and development for innovations and monitoring and evaluation.

**Tourism.** The corridor enjoys great potential for tourism, a major generator of jobs, particularly at the middle to lower end of the income scale and also particularly for women and youth. The spillover effects of tourism into sectors such as construction, services, and ecology are considerable. Equally notable is the incentive effect that an expanding tourism industry exerts on upgrading skills in services.

The private sector must invest in areas for expanding tourism services, and new investments, including in skills, is also essential. Infrastructure improvements, air and road links, and communication facilities are needed for PPPs to succeed. Of equal importance is market development, branding, and advertising. The catalytic role of the public sector in facilitating business transactions, negotiating PPPs, and building essential infrastructure is critical if private investments are to be triggered.

#### **Actions.**

- (i) Reopen the mountain border to trekkers and climbers. To enable the development of seasonal cross-border hiking, trekking, and climbing activities between Almaty and Issyk-Kul, both governments must finalize the drafted agreement.

- (ii) Set up a joint mountain rescue service.
- (iii) Develop an integrated Bishkek ski product. In the mountains south of Bishkek and within 50 kilometers of the city, there are several well-established ski slopes and ski resorts that attract local skiers but are also popular with visiting skiers from Almaty.
- (iv) Use the lake. Tourist demand can be better balanced by targeting the conference and exhibition market whose traditional operating season is September to June.
- (v) Conduct a feasibility study to determine the overall concept, size, and mix of meeting rooms, business sectors attracted, and financial viability, after which a possible project can be assessed for construction under a PPP framework.
- (vi) Improve capacity in wastewater treatment and garbage disposal at Cholpon-Ata. The waste treatment infrastructure needs strengthening, possibly through a PPP framework.
- (vii) Develop a land-use zoning plan for the Cholpon-Ata area. Development in Cholpon-Ata since independence appears to have taken place in an ad-hoc fashion, particularly between the main east-west coastal road and the lake. Examine the current situation, leading to recommendations for a practical strategy for zoning existing and prospective development land.
- (viii) Develop a master plan for the Issyk-Kul area, Ile-Alatau National Park, and surrounding areas to include inter-alia zoning and land-use regulations, environmental standards, and supporting facilities for mountain tourism.

**Advanced health services.** The corridor has potential for expanding trade in advanced health services across the two cities and their surrounding regions, resulting in large efficiency gains and cost containment. Research indicates a high rate of return with an integrated approach to health services. Cost savings can be realized if certain high-cost treatments (e.g., for cancer and cardiovascular disease) are concentrated in one of the cities with access for patients from the entire corridor region. In large parts of the corridor, the Kazakh population is located much closer to hospitals in Bishkek and Chuy *Oblast*.

### Actions.

- (i) Foster trade to address clinical care, insurance, research, education, and regulation, and take into account multiple stakeholders (i.e., physicians, patients, the community, government, payers, and health facilities' owners) and forms of risk and investment (e.g., building capacity, upgrading facilities, health technologies and equipment availability, partnerships, and acquisitions).
- (ii) Create a legal framework between the two countries to establish a secure basis for trade in health services, as the EEU treaty contains no provision for cross-border trade in health services.
- (iii) Propose clinical areas for collaboration. The principal Kyrgyz imports are in advanced technologies for treatment of circulatory system diseases, radiotherapy for cancer, stereotactic interventions in neurosurgery, and advanced technologies for treatment of injuries and the musculoskeletal system. In addition, there is a growing demand for in-vitro fertilization. The Kyrgyz Republic can provide health care services in Chui and Bishkek hospitals under the state-guaranteed benefit package to Kazakh citizens living in border *rayons* as well as offer advanced surgery to the citizens of Almaty who choose to consider Kyrgyz health care hospitals and/or professionals.
- (iv) Establish a collaboration between hospitals in Almaty and Bishkek to support professional development and/or help reduce patients' efforts and travel costs for consultations.
- (v) Establish working protocols between the Committee for Purchasing Medical Services of Kazakhstan and Health Insurance Fund of the Kyrgyz Republic.
- (vi) To improve access of Kyrgyz patients to oncological facilities, develop formal mechanisms with Kazakh providers, and establish a mechanism for mutual accountability, harmonization of the state-guaranteed benefit package, and harmonization of the accreditation standards of inpatient care for improved access of Kazakh patients to health care in the Kyrgyz Republic.
- (vii) Draft legal changes necessary to extend identical health privileges to citizens of the two countries, consistent with EEU obligations.

- (viii) Design information and payment platforms for services open to private and public sectors.
- (ix) Design common protocols and standards for health services offered in corridor facilities.

**Connecting Markets.** Making market structures in transport truly competitive and integrated throughout the corridor requires deregulation while preserving the requirements of safety and free entry. However, competition is hampered by the lumpiness of infrastructure investments in transport, and also by strong externalities arising from “network effects” (i.e., returns to investments in a particular link exceeding what can be captured by the investor), because such investments benefit other connections in a transport network. Thus, the regulatory design and the nature of PPPs must internalize such effects by ensuring appropriate rewards to private investors.

An important link is air between Almaty and Bishkek, where liberal regulatory conditions for passengers and freight, ideally through an open skies arrangement, should be considered. This will benefit trade between the cities in services (including health services) and knowledge, and for the corridor in tourism and transport of agribusiness outputs and manufacturing in general, particularly where just-in-time or perishable items are concerned.

The vital connectivity objective of improving trade facilitation has been helped by the Eurasian Customs Union, but ICT can also play a vital role. Although customs barriers have been removed in the corridor with the inception of the customs union, onerous migration controls and veterinary and other sanitary controls remain, contributing to delays of several hours at the main border-crossing point of Kordai.

An integrated corridor needs not just the behind-the-border reforms but also an alignment of policies and regulations affecting the business environment, property rights, taxes, and conditions for foreign direct investment, and rules of operation in SEZs and industrial parks so that a truly unified economic space in the corridor is created. Policies at the border should encourage the free flow of goods and labor. Beyond the border, a

common regulatory regime and apparatus for transport and energy and logistics services, with harmonized practices, will help create a single corridor market.

The identification of integrative regional infrastructure, transport, energy, and telecommunications must be followed by detailed investment and financing plans, emphasizing the private sector. Moreover, close cooperation in public goods or semi-public goods and shared facilities (e.g., common standards and testing laboratories; livestock treatment facilities; SEZs; preservation and upkeep of forests, pastures, and lakes for tourism; food safety; and internet services) will yield rich dividends.

**Rail.** A high-speed rail connection, built partly on existing tracks, will contribute to promoting agglomeration, helping restructure the economic space. In the context of regional integration along the ideals of the EEU, improved connectivity between the two principal commercial and political cities of the two member states could be a high priority. Such infrastructure projects have dominated economic integration, for example, in the European Union, and also play an important role in economic convergence among Association for Southeast Asian Nations (ASEAN) member states.

A high-speed rail connection for passengers and freight with electrification and modern signaling, particularly if associated with trade facilitation measures such as on-train immigration and other border clearances, will also raise returns to trade and expand corridor economic activity, decongest the parallel road network, and reduce road accidents. In particular, it will improve the interoperability of the corridor, its capacity, and safety. The investment is expected to increase the commercial speed of passenger and freight trains up to 120 kilometers per hour and the capacity of each freight train owing to the increase of traction power. The implementation of the new connection is expected to increase the safety of rail transport and line capacity, as well as reliability of the service due to improved operating conditions.

**Road.** Road transport is also critical to reducing the excessive travel time between the two cities, especially in linking intermediate urban spaces. The strategy should focus on two areas. First, within the metropolitan development initiatives of the two cities, priority should be given to the axes of growth, Bishkek–Kordai in the south and Almaty–Uzynagash in the north. Second, an intermediate urban node should be developed around Kenen–Otar–Gvardeysky–Matibulak. This space includes the main population nuclei between Almaty and Bishkek, is located in an intermediate point between the two cities, and has a combined population of about 30,000. Moreover, it has rail connections; is the space where major transport axes from the north, center, and south of Kazakhstan meet; and has some of the most important agricultural research centers and agricultural development pilot projects. Important mining zones and areas for the production of renewable energy are also found in its surroundings.

#### **Actions.**

- (i) Design a master plan for an integrated approach to multimodal transport in the corridor.
- (ii) Design and implement a strategy for an integrated, competitive transport market.
- (iii) Develop a trade facilitation strategy to remove barriers to competition and emergence of a single market through regulatory reforms to thin the border.
- (iv) Design a plan for an open skies aviation regime within the corridor, or, more widely, between the two countries, consistent with EEU obligations.

#### **Branch 3: Knowledge and Technology**

Creating a dynamic, skills and knowledge-intensive economy is a key strategic thrust for developing the corridor. This broadly requires investing in skills, providing a good business environment, and fostering creation of deep eco-systems to support knowledge and technology-based services. It is essential for the two cities to integrate their institutions for higher learning, both universities and vocational training, as well as build strong networks between universities, research centers and businesses. This should be complemented by attracting foreign direct investment linked to

technology, and facilitating incubators and start-ups around the foreign investments. Promoting in-flows of skilled people, whether migrants or returning diaspora, would be useful.

**Education and skills.** Since independence from the Soviet Union, both Kazakhstan and the Kyrgyz Republic have established a large network of national and regional tertiary education and technical and vocational education and training (TVET) institutions, consisting of public and private universities, research institutes, and vocational training schools. The success of the corridor will depend on building up human capital to power the emerging services-oriented economy, which demands identification of skills requirements and a strategy involving the private sector as well partnerships to deliver these skills.

#### **Actions.**

- (i) Encourage the establishment of branch campuses of a few good quality Kazakh universities in Bishkek.
- (ii) As sharing scientific facilities for collaborative research is common, link modern laboratories through fast broadband connections, allowing for the sharing of expensive equipment and facilities within countries or across nations.
- (iii) In partnership with the national ministries and academies of science of both countries, consider financial incentives to support the participation of scientists from Almaty and Bishkek in international research networks and the development of joint projects and research facilities.
- (iv) Offer joint or dual degrees as a vehicle for improving the quality and relevance of programs.
- (v) Design information and payment platforms for services open to the private and public sectors.
- (vi) Develop ICT-based incubators in universities.

#### **Information technology and communications.**

Increased skill levels to exploit new ICT-based opportunities are central to the development of the corridor. ICT sophistication requires hardware infrastructure to support applications, broadband communication facilities, and various infrastructure to coordinate communication between cities. Central to the strategy is binding city planning and city

services together, leading to a leap in quality and accessibility, expanding the range of services available, attracting private investments, and greatly lowering transaction and payment costs to benefit trade in services between the cities and beyond.<sup>5</sup>

Thus, the corridor can be developed as a digitally supported economy,<sup>6</sup> utilizing global best practices by addressing constraints such as lack of access to the right information, lack of multisector coordination for seamless services delivery and waste reduction, and remedying inadequacies due to sector-specific infrastructure constraints. Clearly, a high degree of regional cooperation is necessary. For example, sharing digital infrastructure and developing common approaches to e-governance between the two cities and throughout the corridor are vital.

The strategy is based on ICT development as a single digital initiative package; the package features specialized applications for trading in two critical public services, education and health, in which private capital will be greatly facilitated through ICT-based solutions, as well as in the two key production sectors of agribusiness and tourism.

Such a package approach will facilitate project management, improved institutional coordination, and implementation of standardized technical solutions across the identified sectors in an efficient manner. A phased implementation approach, an oversight committee (i.e., the Digital Corridor Committee), and a scheme to build capacity and manage ICT-based changes in sector operations will be developed.

The major challenges lie, first, in the integration of data between the existing ICT systems in both Almaty and Bishkek with the proposed new systems due to differences in the technology used, availability of data in real time, and various policies governing the data in the two systems. Second, institutional buy-in, and collaboration

and coordination between various stakeholders are essential, as implementing digital activities entails changes to business processes and standard operating procedures. Third, a digital corridor requires infrastructure sharing between the two cities, necessitating a commitment to undertake digitization activities adhering to best practices and standards. Finally, the need for deep capacity development must be recognized

#### **Actions.**

- (i) For the corridor, propose novel regional cooperation arrangements for sharing computing infrastructure services.<sup>7</sup>
- (ii) The governments must push to improve ICT access. Free public Wi-Fi access across the corridor is in the interest of both residents and tourists. Data access is a key success factor, particularly easy access to services via smartphones or personal computers through the internet. Internet access could be through fixed-line broadband, mobile broadband, or through a public Wi-Fi system.
- (iii) Design the digital corridor to enable broadband services, e-governance, and access to city services and facilities.
- (iv) Acquire human skills in all of these areas.

#### **Branch 4: Urban Management**

**Building economic connectivity.** Almaty and Bishkek lack the degree of economic concentration and specialization seen in the leading cities of Asia. Moreover, few urban nodes are located on the main transport axes; instead, extended rural voids with low population densities predominate. Interurban connections embody high costs in time and money, deterring commerce between cities. The system is further fragmented into a series of urban corridors between nearby cities with a subregional or purely metropolitan character (i.e., Kayyngdy–Bishkek–Tokmok and Uzynagash–Almaty–Shelek).

<sup>5</sup> The ICT development index 2015 from ITU shows that in Kazakhstan, the number of individuals using internet is 55%; in the Kyrgyz Republic, it is 28%.

<sup>6</sup> Digital infrastructure refers to communication components (network and associated equipment) and computing infrastructure (hardware and associated equipment).

<sup>7</sup> The common infrastructure, normally hosted and maintained for a fee by a third-party ICT vendor, is referred as cloud services. This method is cost-effective by reducing hardware infrastructure required for application services. With no cloud service, the two cities would have to establish the same duplicative computing infrastructure and associated services. Cloud also brings efficiency and cost-savings in operations and maintenance.

Moreover, these subsystems are not well integrated. The cities function as isolated elements, without generating network dynamics, resulting in a loss of opportunities, difficulties in defining specialized and competitive urban profiles, and reduced critical mass that translates into weak productivity and basic services systems. Markets have a pronounced local character, which limits business expansion and hampers opportunities for jobs, the capacity for innovation, and economic dynamics. The strategy must thus support the concentration of private sector activity in cities, and the identification of constraints to market forces impelling concentration will be important, so that scale economies and cluster services can be encouraged.

Recently, Almaty has grown rapidly and diversified toward services and finance. Although diverse sector-based initiatives have been launched in the city, no urban proposals have been designed for the long term. Proposals for the Almaty agglomeration tend to consolidate a model of radial-centric metropolitan growth that will inevitably cause increasing congestion in the central zones of the city. Lacking are urban renewal initiatives aimed toward higher densification and balance between different areas of the city to attain a more compact, efficient urban space. These actions are important for minimizing mobility needs and increasing efficiency in public transport systems and in services and supply networks that are fundamental for the improvement of resources management and the sustainability of the city.

The improvement of central zones of the city, generating high-quality spaces with a greater urban identity, deserves attention. This initiative will trigger the development of the creative economy and tourism sectors, and generate an image of Almaty as an attractive city with a good quality of life. To be successful, it must be framed within a global project for the whole Almaty agglomeration. This initiative must generate new central areas in the peripheral nodes, design a strategy to relocate industrial and logistics spaces currently located in central areas, develop a metropolitan mobility proposal that links a multimodal transport system with the processes of urban development, and design a strategy for sustainable growth of environmentally interesting spaces with renewable energy systems.

Bishkek suffers from a weak production base and has experienced rapid uncontrolled growth. Informal settlements contribute low-quality living conditions and scarce access to basic public services and infrastructure. A comprehensive approach to fostering efficient growth based on a vision of a competitive, inclusive, and sustainable urban model is lacking. Critical urban issues (i.e., housing, basic services, quality of life, economic progress, resilience, sustainability, mobility, and urban growth) must be tackled in the context of the lengthy urban corridor that has emerged along the city east to west.

The linear structure of the agglomeration is promising for consolidation, in a sustainable manner. Linear urban structures are the most efficient and sustainable urban systems, particularly for ecological corridors, communication axes, and highly accessible public transport systems. There is the need to establish control over urban expansion in Bishkek to prevent invasion of productive agricultural zones and risk areas.

An urban growth system oriented toward more compact spaces with a greater urban intensity is fundamental for improving the housing supply. Moreover, strategic actions in the central zones of the city are crucial to boost the local economy. It is fundamental to increase the urban intensity in these spaces and increase the mix of uses, primarily along the main urban axes where tertiary activities should be enhanced.

Indeed, creating networks of cities, strengthening urban spaces, and integrating territories all make up a strategy that will be vital for Almaty and Bishkek, enabling the corridor to compete internationally with huge metropolitan centers.

**Infrastructure and land policies.** Public policies must address the needs of the cities and corridor, linking their varying economic densities across secondary cities and farmland. Top priorities in public policy are market-based approaches to land use and transfers, and the delivery of basic infrastructure and services (i.e., education, health, water and sanitation, and transport). Institutions for land are registries, clear property rights and enforcement, effective sales, leases, supporting financial infrastructure, and flexible zoning. Regulations on land use and conversion of land-use rights must incorporate the needs of agglomeration as well as environmental factors.

**Legal framework for land use.** In Bishkek, the weakness in the regulatory and institutional framework for urban management, particularly land policies, is evidenced by inadequate housing supply, poor economic use of land such as vacant brownfields in the city center, and proliferation of illegal settlements. The principal causes of poor land management are

- (i) the fragmentation of the legal system resulting in poorly coordinated laws and regulations with unclear enforcement responsibilities across various levels of government;
- (ii) a lack of effective implementation of laws due to the technical and financial weakness of the bodies responsible for their implementation;
- (iii) complexity of property records management and lack of transparency given difficulty of access to information about real estate, soil on public property, and urban planning;
- (iv) soil and urban development legislation lacking instruments and procedures to allow renovation and densification of land, reuse of old brownfields, and effective management of public spaces;
- (v) inadequacies in the system of mortgages and loans for construction leading to an underdeveloped market with costly products; and
- (vi) the separation of the city and its metropolitan surroundings at two different government structures (Chuy *Oblast* and Bishkek City), greatly complicating urban management and the efficient provision of infrastructure and services.

Almaty faces similar challenges. However, planning and implementation bodies are more efficient, with higher technical and financial capacity. Legal and planning instruments are public and have facilitated the development of real estate and finance services with numerous operators and high levels of information and transparency. The main challenges are associated with the administrative fragmentation between the city and province, which has been partially eliminated by the

planning level of agglomeration made by the national government. There seems to be a clear distinction between the private, highly efficient real estate market, and less effective public provision of social housing systems.

Yet the role of the private sector needs to be enhanced. Urban development regulation balances urban renewal and new developments, but improvements are needed in the linkages between construction and urban development and the planning of infrastructure systems for urban expansion.

**Green cities.** Both countries and cities are among the most inefficient users of energy, with severe underpricing of electricity and gas being a major distortion. The path to a greener future, which is urgent in light of the extreme vulnerability of the region to the effects of climate change, lies in investments in energy savings promoted by fiscal and other incentives, changes in building codes, as well as policies on the supply side, particularly in the generation of electricity.

**Disaster risk management.** Almaty and Bishkek are both vulnerable to natural hazards such as earthquakes, floods, landslides, and extreme temperatures. Climate change is likely to exacerbate these hazards and put additional pressure on limited capacities. Mitigation can be found in assessment of risks, scope for risk reduction, preparedness for disasters, and capacity to respond effectively once disasters strike.

Striking gains can occur in developing city-level disaster risk management capacity, beginning with strategic planning informed by understanding city-level risks, developing risk reduction mechanisms, identifying risks that cannot be eliminated, and preparing a protocol and coordination mechanism for responding to disasters. Participation of civil society groups should be encouraged. The initial focus should lie in strengthening city-specific institutional frameworks for disaster risk management in a way that institutionalizes city cooperation.

## Actions.

- (i) Design information and payment platforms for trade in services open to the private and public sectors.
- (ii) Develop a legal framework for regional cooperation for building regulation, cultural development and tourism, green energy and building (which also includes environment and natural resources management and transboundary ecosystems), natural disaster management, solid waste management, and zero-carbon public transport.
- (iii) Harmonize building codes and small business registrations between both cities.
- (iv) Integrate municipal planning, finance, and sustainable development issues into not only sector, national, and subregional planning approaches, but also through interregional efforts in the anchor cities and across the corridor.
- (v) Develop integrated city information systems to allow city-to-city knowledge sharing to occur.
- (vi) Build capacity for the collection, management, and exchange of information for the sustainable management of human, environmental, and natural resources.
- (vii) Develop and implement common programs on the environment and natural resources management, disaster preparedness and mitigation, and building resilience in general across transboundary ecosystems.
- (viii) Improve safer access to work, home, and recreational areas for urban residents.
- (ix) Develop management and information linkages between city authorities for coordination of policies, such as land zoning and transport planning and implementation, including intercity transport links; building codes and enforcement; environment and green city development; integrated information and access to services systems for citizens, unified across the two cities; common business licensing and inspection approaches; business information and participation; labor market forecasting and skills planning and development; and development of common approaches to PPPs and creating the legal and implementation basis for joint PPPs.
- (x) Create new and reform existing institutions in each of the above topics to design and implement policies in a coordinated, joint fashion.
- (xi) Acquire human skills in all of these areas.
- (xii) Initiate joint approaches to green cities, through strategy, pricing, and regulatory reforms.
- (xiii) For disaster risk management, develop risk assessments based on detailed hazard maps for Almaty and Bishkek; assess how city disaster risk management institutions interact with each other and with counterparts in neighboring countries to cover the availability of disaster risk management plans, access to information and communication systems, emergency protocols and equipment, guidelines for safe construction, training programs, and public awareness building programs; establish early warning systems involving seismic monitors, automated weather stations, hydrological gauges, and glacier melt monitors; and acquire human skills in all of these areas.

## IV. Sequencing: Building the Corridor

Analysis under ABCI has mapped out several initiatives and projects covering different areas at sector and city level as well as interventions linked to institutional, policy and capacity building. Together these provide a comprehensive conceptual development plan of what needs to be done. This is a large and complex agenda which raises a practical question for policymakers seeking to implement development of the corridor, namely, sequencing: what should be done when. Given limitations of resources—financial, administrative, and technical—the actions outlined previously will need to be carefully sequenced.

The sequencing has to address choices across sectors as also within specific sectors. In developing the sequencing, attention needs to be paid to capacity constraints as well as the need to reach strategic political decisions in the process of developing the corridor. A detailed assessment of appropriate sequencing(s) will be a substantial task and should form part of the next step for developing the corridor.

The sequencing will have to be driven by the need to develop sector-level strategic details in a cooperative manner across the countries and cities. The need to undertake policy initiatives that will affect the success of investments before the investments are undertaken will also be a factor. Front-loading policy and institutional reforms will also have a greater impact on catalyzing private

investments to complement public investments.

It is proposed that the sequencing of actions be detailed in a subsequent report, the Investment Framework Implementation Plan (IF-IP). The plan will detail the requirements necessary to implement the sequenced program over 15 years, taking into consideration the operational and management needs for efficient project implementation. Aside from addressing sequencing issues, the IF-IP will also develop more detailed assessments of recommended policy reforms and of specific investment projects identified in the IF. More details on the financial side, such as costs of projects and initiatives and resource mobilization for their financing will also have to be addressed by the IF-IP.

While endorsing the concept of the IF-IP, the Joint Working Group, at its fourth meeting on 26–27 September 2016, underlined the need to initiate corridor development with some projects and initiatives that nevertheless could be considered for early implementation.

Based on discussions within the Joint Working Group a short list of prioritized projects and initiatives was identified. Activities and investments on this list reflect readiness for early action, particularly implementation. They also reflect areas considered critical for joint cooperative work to give life to the corridor as well as areas where private investments can be attracted at an early stage.

**Table 1: Prioritized List of Projects and Initiatives**

Category	Actions
Agriculture	Create agriculture label or branding that certifies regional products to meet certain quality standards Set up laboratories for food safety Establish value chains for fruits and vegetables with ICT applications
Education	Coordinate to introduce high-technology emerging area ICT course contents between universities and facilities
Health	Harmonize health insurance for cross-border health services and e-health Pilot e-health services in Almaty and Bishkek.
Improve connectivity	Improve border-crossing time and convenience Assess high-speed rail option Assess options to reduce prices for air transport Improve communication and ICT technology (i.e., smart city) Initiate steps to revitalize mountain tourism (border-control points, mountain safety, rescue) Create Almaty–Issyk-Kul road
Tourism	Create common branding and marketing for tourism Develop health tourism and telemedicine Set up tourism information centers
Urban	Agree on standards for automation of urban management and services Establish early warning system for disasters
Other	Foster joint events for mayors

ICT = information and communications technology.

## V. Next Steps

### A. Institutions and Management of the Corridor

The ABCI steering committee must consider the institutions and management structure for formulating and implementing the corridor, bearing in mind the binational and bi-urban nature of the endeavor. Institutional considerations must deal with the possible need for a treaty, intergovernmental agreement, or similar legal instrument between the two countries and two cities to lay the basis for decision making and implementation for the corridor. Two forms of institutions also appear to be necessary:

- (i) The Supreme Corridor Authority will be the highest policy-making body, making all political and strategic decisions; approving the multiyear development plans for the corridor, including policy, institutional, knowledge, and investment aspects; and approving annual work programs. It will be headed by the prime ministers and could have key sector ministers as well as mayors as members. Details of its composition, frequency of meeting, and work rules must be defined as corridor design work proceeds. Its reports should to be sent periodically to the existing bilateral mechanisms of consultations between the two governments.
- (ii) The Corridor Development Authority will be the implementing body with powers to make decisions delegated to it by the Supreme Corridor Authority. It will consist of full-time members with exceptional management skills. The details of its structure and work plans will be defined as the work progresses. It will report to the Supreme Corridor Authority.

Details of the organization structures of all these bodies will be determined by the two governments in further consideration.

### B. Financial Aspects

The activities and investments of the corridor will be financed under a range of instruments. The costs of the two authorities and secretariat will

be met by the budget of the corridor to which the governments and other entities contribute. The investments of the corridor (including knowledge, institution building, and infrastructure) will be financed from grants or loans from a variety of sources, and the financial as well as procurement arrangements will follow the rules of the lending institution. Thus, the borrowing or guarantee-providing authority for investments and other expenditures associated with the corridor will lie with the sovereign governments.

Identification of the sources for technical assistance, financing for knowledge, and infrastructure investments from an early stage are important, and should be addressed by the IF-IP. Consideration should be given from the start for the possibility for financing from the private sector, including foreign direct investment and associated changes in incentives and regulations necessary to attract private investments. Thus, the importance of engaging foreign investors immediately is noted, and for this purpose, appropriate public communications must be designed.

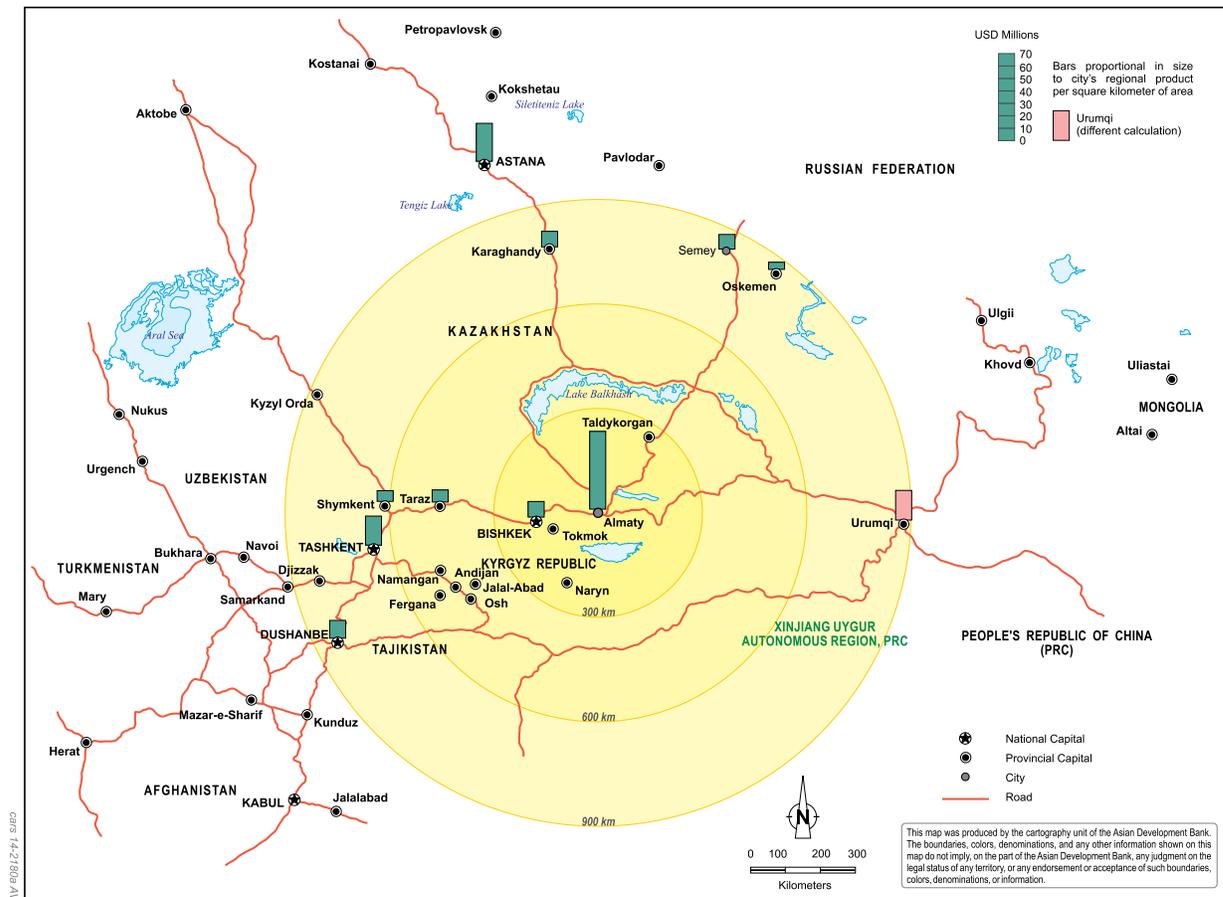
Other sources of financing will be international financial institutions (possibly as regional programs), donor governments, EEU, initiatives such as CAREC and the Silk Belt and Silk Road. Outreach programs must be devised from an early stage, beginning with road shows for the concept of the corridor. These aspects will also form an integral part of the Investment Framework Implementation Plan.

### C. Recommendation

It is recommended that the steering committee make the following decision:

The steering committee approves the proposals of Chapter IV and V of the Almaty–Bishkek Corridor Initiative Investment Framework Report. It instructs the Joint Working Group to draw up a memorandum of understanding to give effect to these proposals to be signed by the two governments and the city authorities of Almaty and Bishkek at the earliest.

## APPENDIX 1: Economic Density in Select Cities in Central Asia



### Notes:

1. Calculations based on gross regional product (latest available data) at market exchange rates.
2. Comparable data were unavailable for Samarkand in Uzbekistan.
3. Data for Urumqi were calculated using only some of the districts and are not comparable with the others in the map.
4. For Kazakhstan, the gross regional product for the city is calculated as the share of city population of the administrative region, except for Almaty and Astana, which are treated as separate regions in the statistics.

Sources: Data are from the statistical agencies of Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan; cities' official websites; and ADB staff calculations.

**Almaty.** The regional dimension of Almaty is evident above, which shows major cities in Central Asia in three concentric circles with Almaty at the center, at distances of 300, 600, and 900 kilometers (km). For each city, the height of the associated bar shows the economic density in economic activity measured by gross regional product (GRP) per square km of the city area. At almost \$63 million per square km, the economic density of Almaty is more than twice as high as the two closest

cities, Astana and Tashkent. Almaty provides a natural fulcrum for economic corridor in the region.

In absolute size, as well, Almaty represents one of the largest economies in the region, with a GRP twice as large as that of the next city, Astana, and greater by almost a factor of more than 15 relative to Bishkek. The city is the largest economy in the region. Almaty accounted for 19% of Kazakhstan's gross

domestic product, with a GRP of about \$42.6 billion in 2013. The city's GRP is composed overwhelmingly of services, with the most significant being wholesale and retail trade, information and communication technology, transport and warehousing, and real estate. Agriculture has no weight in the city's GRP, while industry and processing industry accounted for only 9.6% of the GRP. The city's external trade turnover was almost \$26 billion in 2013, of which nearly \$20 billion was imports. Measured by population, Almaty is the largest in the region after Tashkent.

Tourism and finance services are important parts of Almaty's economy. Nearly one-third of all workers in the finance sector in Kazakhstan are employed in the city, which accounted for 44.1% of total deposits and 39.0% of loans in the country in 2013. It is also on the way toward developing into the region's financial center. The central bank, which is also the financial regulator; the stock exchange; 33 commercial banks out of 39; and 31 insurance companies operate in the city.

Almaty's profile as a regional gateway is also evident from its role as a distribution center for goods, and as a regional hub for international organizations and companies. It is also a destination for migrant labor from neighboring countries, both for seasonal and long-term work, as well as a transit destination.

**Bishkek.** Spread over 170 square km, Bishkek had a population of 895,000 in 2012, growing at 1.5% per year since 2005. Although much lower than Almaty, the per capita income in Bishkek is 2.5 times the national average, a gap that has been widening over time. Through much of 2006–2012, Bishkek has accounted for more than one-third of the Kyrgyz Republic's gross domestic product, reaching 38.8% of the gross domestic product in 2012. The city's GRP was about \$2.6 billion in 2012, and has grown at 7.5% per year since 2006.

Bishkek is primarily a services economy with manufacturing accounting for less than 10% of the GRP, despite having grown its share marginally due to the rise of the garment industry during the past decade. Aside from the garment industry, the main industrial sectors of Bishkek are food production, which is partially export-oriented; and production and distribution of electricity, gas, and water, catering entirely to the domestic market. The share of manufacturing in total employment is higher than its share in the GRP, implying lower labor productivity than in the services sector. Within the dominant services sector, trade and transport and communications are important, followed by consumer services and finance services.

In addition, Bishkek serves as the consolidation and distribution center for the Kyrgyz Republic. Its total imports in 2012 were \$3.2 billion, and total exports were \$1.2 billion. Imports into Bishkek are consumed not only in the city but also in other parts of the country. This is also true for some exports, which are sold from Bishkek, but produced in other parts of the Kyrgyz Republic, such as gold and electricity.

Both cities are structurally similar, with low shares for manufacturing, and dominance of services. At the same time, the cities also need to compete in their common areas of focus, such as tertiary education, research, skills-oriented services, and health care; they also need to cooperate in infrastructure planning, knowledge sharing, and definition and management of special economic zones. The extent to which strategic cooperation and competition can benefit both economies is an important determinant of the success of the economic corridor.

## APPENDIX 2: Area Connecting Almaty and Bishkek

The area linking Almaty and Bishkek consists of the *oblasts* (provinces) of Chui in the Kyrgyz Republic and those of Zhambyl and Almaty in Kazakhstan. In all of these *oblasts*, low levels of economic activity coexist with low population densities. The population density in Chui is only 40 persons per square kilometer (km), while Zhambyl has 7 persons per square km. By comparison, the population densities in Almaty and Bishkek, the corridor's endpoints, are close to 5,000 persons per square km.

Almaty and Zhambyl *oblasts* are predominantly rural, with urban populations representing about 23% of the total population in Almaty *Oblast* and 39% in Zhambyl. Agriculture accounts for about 14% of the gross regional product (GRP) of Almaty, and 10% of that of Zhambyl. Services account for 66% of the GRP in Almaty and 70% in Zhambyl. The per capita GRP was about \$5,150 in purchasing power parity terms in Almaty and \$2,600 in Zhambyl.

Agriculture, including crop, meat, and milk production, is the largest sector in Chui, but its share in GRP fell over 2003–2012. There, manufacturing, construction, and transport and communications have grown strongly during the past decade, with industry and services now accounting for 25% and 37% of the GRP, respectively. Key sectors of manufacturing include food production, construction, and metallurgy.<sup>8</sup> There is a free economic zone, which has three locations in Chui near Bishkek. Operating since 1995, it has 80–100 enterprises with investments from more than 20 countries, and provides jobs for 2,500–3,000 persons. In 2012, the free economic zone's net exports were negative. This is accounted for, in part, by the large share of production for the domestic market and by the fact that substantial exports are accounted for by re-exports of cars that are not manufactured or assembled locally. Further, the urban population share in Chui was 17.8%, the income per head in purchasing power parity terms was \$2,400, and it had a significant poverty rate of 28.6%.

Direct bilateral trade between Almaty and Bishkek, utilizing the corridor, is dominated by primary products and services, including intrasector trade. Aside from fruits and vegetables, anecdotal evidence suggests considerable informal exports of meat and live animals (e.g., cattle, horses, and sheep) from the Kyrgyz Republic to Kazakhstan, despite a ban on exports of products of animal origin from the Kyrgyz Republic to Eurasian Customs Union countries like Kazakhstan. Tourism, finance, health, and education are also important sectors for trade in services between the two cities. There are considerable tourist flows such as Kazakh tourists to Issyk-Kul in the Kyrgyz Republic, and Kyrgyz travelers catching flights from Almaty International Airport or trains from Shu Railway Station.

Generally, Almaty specializes in sophisticated, capital-intensive, and expensive services (e.g., high-technology medical services), while Bishkek offers more affordable alternatives for services, which do not require expensive personnel and equipment (e.g., dental care and some types of tertiary education). Tertiary education is another example of intrasector trade between Almaty (expensive, recognized brands) and Bishkek (affordable quality). Repair of cars is also a service exported from Bishkek to Almaty.

In summary, the area within the corridor is characterized by low levels of economic activity, primarily services, and some agriculture. Within this area, several economic activities are found: wholesale and retail trading, transport and communications, finance services, and tourism. In view of the large size of the cities that exert a pull on economic activities, their physical proximity (just 150 km), a factor that adds to this pull, as well as differences in endowments, there are potential gains to be realized by the area within the corridor from increased trade and integration between the two economies.

<sup>8</sup> Kara-Balta in Jaiyl *Rayon* (District) hosts a gold refinery, which processes concentrate produced at the Kumtor gold mine and explains large shares of metallurgy in industrial output and of manufacturing in the GRP. This is also partially responsible for fluctuations in GRP, replicating gold production patterns.

## APPENDIX 3: Proposed Projects for Almaty–Bishkek Corridor Initiative Implementation

The proposed projects and initiatives are recommended for the implementation of ABCI by national, provincial, and city governments, as well as development partners.

### A. Agriculture

**Table 2: Agriculture and Agribusiness**

Transformative Interventions by Value-Chain Segment	Fruit and Vegetable Food Belt Value-Chain Cluster	Dairy and Livestock Value-Chain Cluster
UPSTREAM: Investments	<ul style="list-style-type: none"> <li>✓ Laboratories, facilities, and equipment for plant health control, disease prevention, compliance, and accreditation</li> <li>✓ Financing for greenhouses, integrated microirrigation and fertigation, farm machinery, and infrastructure</li> <li>✓ Organized agro-input or one-stop input shops through PPP schemes</li> <li>✓ Investments for piloting consolidation of small holder farmers through group formations, and linking with international input suppliers and commercial banks (e.g., through promissory notes); NGOs as aggregators; management contracts-cum-leaseback; joint ventures of farmer groups with international agribusiness investments in e-mobile for extension services and market information</li> <li>✓ Investments in weather stations, drones, GIS, remote sensing, and other ICT for locust monitoring systems and soil and water availability</li> <li>✓ Investments in e-mobile for extension services and market information</li> </ul>	<ul style="list-style-type: none"> <li>✓ Laboratories, facilities, and equipment for animal health control, disease prevention, compliance, and accreditation</li> <li>✓ Investments for piloting cross-border contract farming arrangements linking farmers with large meat and dairy processors, distributors, and retailers</li> <li>✓ Joint appropriate livestock identification and traceability systems using remote sensing and other ICT</li> <li>✓ Investments in e-mobile for extension services and market information</li> <li>✓ Investments in weather stations, drones, GIS, remote sensing, and other ICT for livestock disease monitoring</li> </ul>
Policy Measures	<ul style="list-style-type: none"> <li>✓ Land markets for agro-food value-chain clusters to open opportunities for land consolidation. For the Kyrgyz Republic, land market policy reforms to reduce registration costs of small farm plots and to increase land rental period to 10–25 years; review for long lease terms of corporate farms; and foreigners, joint ventures, and nonagriculture co-ops to be considered as legal entities to buy and sell agriculture land. For Kazakhstan, land market to be more flexible in pricing to facilitate the sale and lease of small farms to introduce higher and stratified land rental fees</li> <li>✓ Harmonized sanitary and phytosanitary reforms for agro-food value chains on fruits and vegetables</li> <li>✓ Risk adaptation and mitigation strategy for the ABCI</li> </ul>	<ul style="list-style-type: none"> <li>✓ Sustainable pasture management regulatory reform for Kazakhstan</li> <li>✓ Risk adaptation and mitigation strategy for livestock, meat, and dairy</li> </ul>

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Table continued

<b>Transformative Interventions by Value-Chain Segment</b>	<b>Fruit and Vegetable Food Belt Value-Chain Cluster</b>	<b>Dairy and Livestock Value-Chain Cluster</b>
Capacity Building/ Institutional Measures	<ul style="list-style-type: none"> <li>✓ Multistakeholder and value-chain player forums to develop and implement new vision for fruits and vegetables (e.g., Viet Nam initiative for coffee) through cluster and value-chain approach</li> <li>✓ Technical support for capacity building and to upgrade the Center for Standardization and Metrology with a focus on ABCI needs</li> <li>✓ Technical support for capacity building to staff and to operate laboratories and facilities</li> <li>✓ Capacity building for farm and agribusiness management, precision agriculture, and Good Agricultural Practices</li> </ul>	<ul style="list-style-type: none"> <li>✓ Co-management of shared pasture resources</li> <li>✓ Harmonized veterinary and feed safety system</li> <li>✓ Technical veterinary extension services; farm and agribusiness management</li> <li>✓ Hazard analysis critical control points, ISO 9000</li> <li>✓ Capacity building on farm and agribusiness management and Good Agricultural Practices</li> </ul>
MIDSTREAM: Investments	<ul style="list-style-type: none"> <li>✓ Pilots for farmer–processor arrangements with value-chain financing for modern equipment; pilots for SME clusters to serve as satellites to larger agro-processors, wholesalers, and retailers</li> <li>✓ PPPs for collection and trading posts equipped with sorting, proper handling, packaging, low-cost and low-energy cooling or refrigerated storage, reusable plastic crates, and transport facilities</li> </ul>	<ul style="list-style-type: none"> <li>✓ Modern abattoir system and slaughterhouses (e.g., Tokmok, Chuy; Issyk-Kul, Zhambyl); last-mile infrastructure; freezing equipment and cold-storage facilities</li> <li>✓ Feed mill investments through PPPs and market links with meat and dairy</li> <li>✓ Pilots of SME dairy and livestock producers with contract arrangements with large domestic or foreign dairy and livestock agribusinesses</li> </ul>
Policy Measures	<ul style="list-style-type: none"> <li>✓ Harmonized food safety, standards, and regulatory measures for fruit and vegetable products</li> <li>✓ Procedures and guidelines for private accreditation of fruit and vegetable products</li> </ul>	<ul style="list-style-type: none"> <li>✓ Harmonized food safety, standards, and regulatory measures for feed, livestock, and dairy products</li> <li>✓ Procedures and guidelines for private accreditation of livestock, meat, and dairy products</li> </ul>
Policy Measures	<ul style="list-style-type: none"> <li>✓ Policy guidance on value-chain financing instruments (forfeiting, trade receivable finance, warehouse receipts, re-purchase agreements, leasing, trade and input supply credit, contract farming, logistics, and seasonal financing)</li> <li>✓ Policy study on subsidies versus banking sector reforms (e.g., upgrading rural banking operations of commercial banks)</li> </ul>	
Capacity Building/ Institutional Measures	<ul style="list-style-type: none"> <li>✓ Hazard analysis critical control points, ISO 9000, Good Manufacturing Practices</li> <li>✓ Capacity building of rural financial institutions on application of relevant tools like agronomy-based credit risk management tools</li> </ul>	<ul style="list-style-type: none"> <li>✓ Hazard analysis critical control points, ISO 9000</li> <li>✓ Training on Good Manufacturing Practices</li> </ul>

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Table continued

Transformative Interventions by Value-Chain Segment	Fruit and Vegetable Food Belt Value-Chain Cluster	Dairy and Livestock Value-Chain Cluster
DOWNSTREAM: Investment	<ul style="list-style-type: none"> <li>✓ At least one trade hub in Almaty and one in Bishkek to be supported by at least one each of logistics platforms in four oblasts of the ABCI through PPPs. Investments could include dry-port terminals, refrigerated chambers at different temperatures, banking and freight forwarding, cargo transit and transshipment, assembly and packaging, tracking and monitoring through ICT, customs brokerage, and other business development services.</li> <li>✓ Cross-border agro-food park that can have agribusiness incubation centers; processing firms; handling, storage, and packaging (e.g., atmospheric packaging systems); trucking and forwarding facilities; logistics ICT for system-wide tracking, tracing, and internet supply chain visibility; trucking and forwarding; customs brokerage and licensing</li> <li>✓ Cross-border checkpoint investments such as road widening, single safety inspection systems, nonintrusive box inspection machines (e.g., x-rays and gamma ray machines), parking and loading/unloading areas, amenities for truck drivers and visitors</li> </ul>	
Policy Measures	<ul style="list-style-type: none"> <li>✓ Mergers and acquisitions</li> <li>✓ Harmonized documentation of transit procedures; common standards for transit operators; and common enforcement standards for fruits, vegetables, livestock, meat, and dairy products</li> </ul>	
Capacity Building/ Institutional Measures	<ul style="list-style-type: none"> <li>✓ Training of technical staff at cross-border checkpoints on traceability, just-in-time delivery services, and proper handling of perishable products</li> <li>✓ Forums to discuss bottlenecks for efficient and effective cross-border value chains and to develop innovative solutions for efficient forward and backward linkages</li> </ul>	
Cross-Cutting Interventions	<p>Market intelligence and market promotions:</p> <ul style="list-style-type: none"> <li>✓ Joint KazNexInvest/Ministry of Agriculture (Kazakhstan) and Ministry of Agriculture and Amelioration (Kyrgyz Republic) in consultation with agro-food value chain players to develop market promotions and intelligence on potential markets and new product items for agro-food (e.g., international exhibits, roadshows, e-promotion, and consumer market research) and research on branding of agro-food value-chain cluster products; funding for 3 years and exit by end of third year with takeover of ABCI-based food associations</li> </ul> <p>Research and development investments:</p> <ul style="list-style-type: none"> <li>✓ Develop action plan for human resources development on the modernization of agro-food value chains through coordination and collaboration of Almaty- and Bishkek-based agriculture universities and institutes with agro-food value-chain players, and collaboration with CGIAR, non-CGIAR, and corporate social responsibility foundations of multinational agribusinesses</li> <li>✓ Innovation fund for laboratory–industry–farm links (e.g., cutting-edge technology on yield improvements through scientific-based farming techniques and technology, new seed varieties, novel agronomic practices for sustainable use of scarce resources and climate change response, incubation laboratories for new nutritious and more protein complex food product lines, and other high-value agro-food products, customizing machinery to local environments, packaging, extending product shelf life), agro-business incubators and startups; matching grants</li> </ul>	

ABCI = Almaty–Bishkek Corridor Initiative, CGIAR = Consultative Group for International Agriculture Research, GIS = geographic information system, ICT = information and communications technology, NGO = nongovernment organization, PPP = public–private partnership, SMEs = small and medium-sized enterprises.

Note: The governments of the Kyrgyz Republic and the Russian Federation have earmarked funds to assist the Kyrgyz Republic in upgrading its laboratories and facilities for plant and animal health. However, with the protracted economic downturn in both economies and the full implementation of the Eurasian Economic Union, investments are urgently needed. International development organizations may need to step in to fund these essential requirements.

## **B. Tertiary Education and Skills: Sequencing of Tertiary Education, and Technical and Vocational Education and Training Reforms and Development**

### **Year 1**

- Coordinate among municipal and regional development authorities and the University of Central Asia to take plans into account for preparation of ABCI skills development projects.
- Match grants for encouraging universities in Almaty and Bishkek to increase academic exchanges.
- Match grants for stimulating the development of strategic partnerships between tertiary education and technical and vocational education and training (TVET) institutions in Almaty and Bishkek.

### **Year 2**

- Create a sector project relying on a competitive grant approach to finance strategic plans of universities and TVET institutions to improve the quality and relevance of their programs through a combination of actions including curriculum modernization, introduction of innovative teaching practices, and forging of close links with industries. Finance laboratory

infrastructure and scientific equipment in tertiary education and TVET institutions, as well as digital infrastructure and digital connectivity.

- Establish program-based operation to provide budgetary support to ABCI development authority in exchange for policy and regulatory measures that facilitate reforms in tertiary education and TVET, with an initial focus on vision development and preparation of the master plans.

### **Year 3**

- Continue sector project, with an additional focus on developing research capacities and engaging with the local economy.
- Continue program-based operation, with an additional focus on strengthening quality assurance and increasing public resources for tertiary education and TVET.

### **Year 4**

- Continue sector project, with an additional focus on developing capacity for knowledge commercialization.
- Continue program-based operation, with an additional focus on giving more institutional autonomy to public institutions and encouraging mergers (in the case of universities in Bishkek).

**Table 3: Tertiary Education, and Technical and Vocational Education and Training Reforms and Development**

Reform	Type of Instrument or Policy Intervention	Technical Complexity
<b>Knowledge Acquisition, Generation and Transfer Cross-border collaboration</b>		
Multi-campus university	Coordination among municipal and regional development authorities and the University of Central Asia	Low
Branch campuses	Infrastructure provided by local authorities	High
Academic exchanges	Sector project	Low
Research networks	Sector project	Medium
Joint degrees	Sector project	High
Strategic partnerships	Sector project	Low
Shared quality assurance	Technical assistance	Medium
<b>Skills development</b>		
Strategic plans of individual tertiary education and TVET institutions	Technical assistance	Medium
Curriculum modernization	Sector project	Low
Innovative pedagogical practices	Sector project	Medium
Close linkages to industry	Sector project	Low
<b>Engagement with the economy</b>		
Public space function	Self-financed by tertiary education institutions	Medium
Relevant research	Sector project	Medium
Problem-solving consulting	Self-financed by tertiary education institutions	Medium
Technical infrastructures	Sector project and private arm of ADB	Low
Knowledge commercialization	Technical assistance and venture capital from private arm of ADB	High
<b>Policy Measures and Regulatory Framework Strategic vision and plan</b>		
Vision for the future of tertiary education and TVET	Policy-based program	Low
Master plan	Policy-based program	High
Free movement of foreign academics and students across the border	Policy-based program	Low
<b>Governance and management</b>		
System consolidation	Policy-based program	High
Quality assurance	Policy-based program	Medium
Institutional autonomy (with accountability)	Policy-based program	Medium
<b>Sustainable funding and incentives</b>		
Adequate resource mobilization	Policy-based program	Low
Performance-based resource allocation	Technical assistance	High
Dedicated resources for the ABCI	Sector project	Medium
Robust digital connections	Sector project	Low

ABCI = Almaty–Bishkek Corridor Initiative, TVET = technical and vocational education and training

C. Health

Table 4: Health Care Services Reforms and Development

Initiative	Rationale	Target	Measurement of Progress	Risks
Kazakh Center of Oncology and Radiology–Kyrgyz National Center of Oncology	Cancer is the second-leading cause of mortality and morbidity in the Kyrgyz Republic. About 50% of cancer patients die within the first year of cancer detection. Oncology services need significant modernization; advanced radiotherapy is not available, and patients who can afford it are seeking health care abroad. Kazakhstan has advantages in provision of comprehensive radiotherapy, because the infrastructure of oncology services has improved, and advanced technologies have been implemented under the national program.	Improved access for Kyrgyz patients to advanced radiotherapy and increased number of life years for patients with cancer	Established referral system for patients from the Kyrgyz Republic  Annual number of Kyrgyz patients who receive radiotherapy services in Kazakhstan within the ABCI	Low commitment of the Ministry of Health to making changes in HTF reallocation  Insufficient funds for reimbursement  Risk mitigation measures can include reallocation of funds for treatment of oncology patients in Kazakh clinics within the essential package of services.
Development of an investment project to modernize oncology services in the Kyrgyz Republic and bring advanced technologies to the population	Oncology services in the Kyrgyz Republic has outdated infrastructure and needs significant modernization. The oncology center is not capable of providing timely, effective services in cancer detection and treatment. The number of patients with cancer and neoplasms increases each year, and is showing no tendency toward reduction. New advanced technologies including stereotactic robotic procedures, cyber-knives, modeling, and selection of the most effective modality for cancer treatment need to be brought to the Kyrgyz Republic.	Improved access for Kyrgyz citizens to advanced technologies in early detection and treatment of cancer.	PPP project is included into the list of the government PPP projects.  PPP selection procedures have started.	Low commitment and support of the government.
Establishment of collaboration between clinics in Almaty and Bishkek for cardiovascular surgery	Cardiovascular diseases are the leading cause of mortality and morbidity in the Kyrgyz Republic. Clinics in Bishkek do not provide advanced technologies for revascularization or valvuloplasty. All patients try to receive care at the National Center of Cardiology and Internal Medicine or National Institute of Cardiac Surgery and Organs Transplantation. However, due to insufficient resources and limited access to cardiac surgery in Bishkek, patients who are capable of paying seek care abroad. Almaty public and private clinics have achieved good results in cardiac surgery and revascularization interventions, and they are ready to provide necessary surgical services to Kyrgyz patients.	Improved access for Kyrgyz patients to cardiac surgery and revascularization interventions	Established referral system for patients from the Kyrgyz Republic  Number of cardiac surgeries conducted within the ABCI	Insufficient funding from the HTF  Limited funding of the state-guaranteed benefit package in the Kyrgyz Republic

ABCI = Almaty–Bishkek Corridor Initiative, HTF = High-Tech Fund, PPP = public–private partnership.

Table 5: Information and Communications Technology Reforms and Development

Grouping	Description	Rationale	TCO for 5 Years with Regional Cooperation (\$ million)
Application services	e-Agriculture: Digital enablement of agriculture and allied services in the corridor.	Agriculture and allied trade is a key economic activity in the corridor. Digital enablement of the activity will help efficiency and cost savings for agriculture and allied services stakeholders, and ease of trade in the corridor.	\$6.147
	e-Tourism: Establishing e-tourism to enhance the tourism experience and developing digital economic ecosystem in the ABCI.	Providing facilities to enhance experience of tourists with digital initiatives leads to the development of new and innovative economic activities in the agglomeration. Further, this will help develop a brand for tourism, and strengthen safety, security, disaster management, and response capabilities of the administration.	\$3.089
	e-Health: Developing the e-health platform to enable wider access and efficient reach of health services in the ABCI.	Introducing e-health delivery capability will help overcome capacity constraints in the form of increased efficiency of the intensivist and radiologist, and increase the reach of experts to the rural sector.	\$15.898
Capacity building	Digital capacity development: Developing ICT skills and strengthening institutional capacity.	Continuous enhancement of skills in the use of ICT is a requirement to sustain the adoption of technology and to develop entrepreneurial activities.	\$2.940
Infrastructure services	Establishment of standardized ICT infrastructure: Developing a common infrastructure platform for ICT in the ABCI.	ICT backbone infrastructure is a substantive item in rolling out ICT-based services. It is technology-intensive, and needs periodic maintenance services. Designing a scheme to share the infrastructure services required will help optimize use of ICT assets, and develop innovative services delivery capabilities involving the private sector.	\$6.377
Institutional support	Installation of digital committee and subcommittees: Developing institutional support to oversee the functioning of digital ABCI initiatives.	Any ICT implementation and operations requires a high-powered oversight committee to facilitate institutional coordination, enable seamless adoption of technology in sector business processes, and oversee and endorse decisions by the implementation agencies.	\$0.375
Policy development	Applicable digital policy and procedures: Creating an enabling environment through development of ICT policies and standards in the digital ABCI.	Introduction of ICT-enabled business processes in key economic sectors coupled with adoption of modern ICT techniques needs an enabling environment in the form of sound policy and procedures applicable to agglomeration. It also requires alignment with the respective national strategy.	\$1.000
<b>GRAND TOTAL</b>			<b>\$35.826</b>

ABCI = Almaty-Bishkek Corridor Initiative, ICT = information and communications technology, TCO = total cost of ownership.

## E. Tourism

**Table 6: Tourism Reforms and Development**

<b>Recommendation</b>	<b>Policy Intervention</b>	<b>Technical Complexity</b>
Improvement of safety and security	Capacity building and policy reform	Medium
Visa improvement policy	Policy reform	Medium
Establishment of the Tourism Promotion Fund	Policy reform	Medium
Border control process improvement	Capacity building and policy reform	High
Approval of destination status	Policy reform	Medium
Expansion and development of Tourist Information Center	Capacity building	Low
Tourism statistics	Capacity building and policy reform	High
Training and skills development	Capacity building	Medium
Development of a national tourism organization	Capacity building	Medium
Domestic tourism promotion	Capacity building	Medium
Improvement of destination image and development of branding plan	Capacity building	High
Road connectivity: option 1	Investment	Medium
Road connectivity: option 2	Investment	Medium
Rehabilitation of Manas International Airport, Bishkek	Investment	Medium
Development of the new Almaty International Airport	Investment	Medium
Rest area development	Investment	Low
Development of a land-use zoning plan for the Cholpon-Ata area	Policy reform	Medium
Mountain border crossing between Almaty and Lake Issyk-Kul	Capacity building	Medium
Development of a historic theme park, Almaty	Capacity building	High
Promotion of hard and soft adventure tourism	Capacity building	Medium
Redevelopment of a mixed-use tourism complex at Lake Issyk-Kul	Capacity building	High
Mountain cultural village development, Lake Issyk-Kul	Capacity building	High
Development of a conference and exhibition center in Bishkek (maximum capacity of 750–800 delegates)	Investment	High
Ski resort revitalization project	Capacity building	Medium
Development of a heritage and Silk Road Corridor between Almaty, Bishkek, and Taraz	Capacity building	Medium

## **Growing Together**

### *Almaty – Bishkek Corridor Initiative Investment Framework*

This report discusses the strategic agenda for developing the Almaty–Bishkek Economic Corridor, as well as the comprehensive framework of investments needed encompassing policy reforms, regulatory coordination, physical infrastructure, capacity building, and institutional development. The report is based on analytical work that was monitored and reviewed by the Joint Working Group, which was established by the two governments following a memorandum of understanding between the mayors of Almaty and Bishkek.

### **About the Central Asia Regional Economic Cooperation Program**

The CAREC Program is a practical, project-based, and results-oriented partnership that promotes and facilitates regional cooperation in transport, trade, energy, and other key sectors of mutual interest. CAREC has 10 member countries: Afghanistan, Azerbaijan, the People’s Republic of China, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan. Six multilateral institutions support CAREC’s work: the Asian Development Bank (ADB), the European Bank for Reconstruction and Development, the International Monetary Fund, the Islamic Development Bank, the United Nations Development Programme, and the World Bank. ADB serves as the CAREC Secretariat.

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