



*Fourth Session of the Asia-Pacific Information Superhighway (AP-IS)
Steering Committee and WSIS Regional Review*

Virtual Meeting, 11 August 2020

Progress on AP-IS subregional initiatives in the North and Central Asia

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NORTH AND CENTRAL ASIA: GENERAL OVERVIEW



NORTH AND CENTRAL ASIA: STATE OF ICT DEVELOPMENT

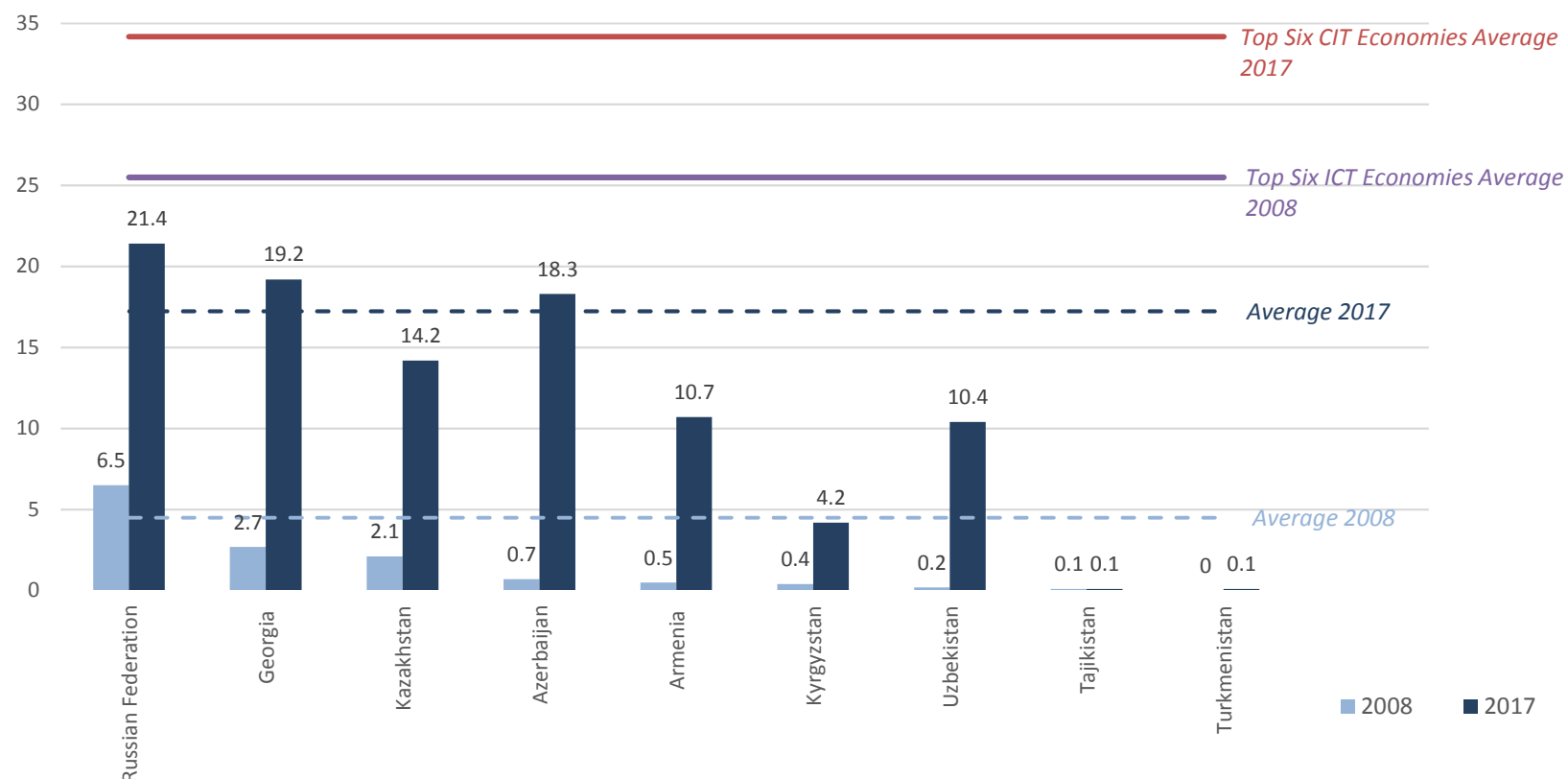
#	Country	IDI, 2017, place/index	GCI, 2018, place/index	NRI, 2016, place/index
1	Armenia	75/5,76	69/61,3	56/4,3
2	Azerbaijan	65/6,20	58/62,7	53/4,3
3	Georgia	74/5,79	74/60,6	58/4,3
4	Kazakhstan	52/6,79	55/62,9	39/4,6
5	Kyrgyzstan	109/4,37	96/54,0	95/3,7
6	Russian Federation	45/7,07	43/66,7	41/4,5
7	Tajikistan	-	104/52,4	114/3,3
8	Turkmenistan	-	-	-
9	Uzbekistan	95/4,90	-	-

ICT Development Index 2017: <https://www.itu.int/net4/ITU-D/idi/2017/#idi2017rank-tab>

The Global Competitiveness Report 2019: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

Networked Readiness Index: <https://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/>


NORTH AND CENTRAL ASIA: FIXED BROADBAND SUBSCRIPTION PER 100 INHABITANTS IN NORTH AND CENTRAL ASIAN COUNTRIES, 2008 & 2017



Source: Produced by ESCAP based on data from the ITU, World Telecommunication/ICT Indicators database 2019 (December 2019 Edition)

Note: The top six ICT advanced economies are the most advanced economies in terms of the ICT development index (IDI); the Republic of Korea, Hong Kong China, Japan, New Zealand, Australia, and Singapore.

ITU STUDY ON THE COMPATIBILITY OF THE CIS COUNTRIES AND NEIGHBORING COUNTRIES IN THE REGULATION OF BROADBAND ACCESS

	Armenia	Azerbaijan	Georgia	Kazakhstan	Kyrgyzstan	Russian Federation	Tajikistan	Turkmenistan	Uzbekistan
Armenia	0	0,3	1,2	0,8	1,4	0,2	2,5	3,8	2,1
Azerbaijan	0,3	0	1,5	0,5	1,1	0,1	2,2	3,5	1,8
Georgia	1,2	1,5	0	2	2,6	1,4	3,7	5	3,3
Kazakhstan	0,8	0,5	2	0	0,6	0,6	1,7	3	1,3
Kyrgyzstan	1,4	1,1	2,6	0,6	0	1,2	1,1	2,4	0,7
Russian Federation	0,2	0,1	1,4	0,6	1,2	0	2,3	3,6	1,9
Tajikistan	2,5	2,2	3,7	1,7	1,1	2,3	0	1,3	0,4
Turkmenistan	3,8	3,5	5	3	2,4	3,6	1,3	0	1,7
Uzbekistan	2,1	1,8	3,3	1,3	0,7	1,9	0,4	1,7	0

- Year of adoption of the basic law regulating the ICT
- Year of adoption of the basic ICT development program
- Principles of international cooperation
- Coincidence of goals of legal regulation
- Competitiveness indicator
- Financing flexibility indicator
- Regulatory Authority Development Indicator
- Coordination level indicator
- Language indicator
- Indicator of open communication

Legend: <3 legislation are compatible, >=3 legislation are not compatible

AP-IS IMPLEMENTATION STRATEGIC INITIATIVES 2019-2020

Identification, coordination, deployment, expansion and integration of the regional backbone network

Establish a sufficient number of IXPs at the national and sub-regional levels and set out common principles on Internet traffic exchange

Regional social and economic studies

Enhancing ICT infrastructure resilience

Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives

Capacity-building

AP-IS funding mechanism based on public-private partnerships

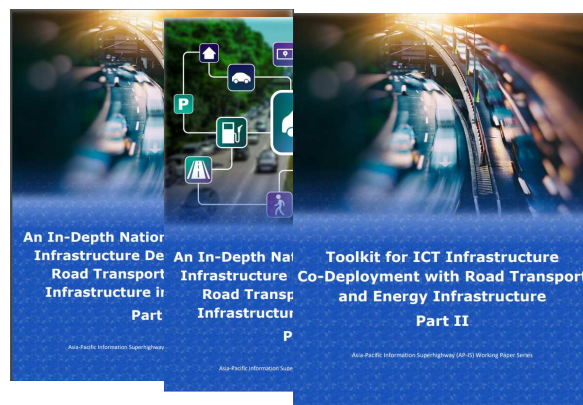
PROGRESS ON AP-IS SUBREGIONAL INITIATIVES: 2019-2020



Kyrgyzstan & Kazakhstan Expert Consultations, 22-25 October 2019, Almaty

<https://www.unescap.org/events/addressing-transboundary-dimensions-2030-agenda-through-regional-economic-cooperation-and>

<https://www.unescap.org/events/addressing-2030-agenda-through-regional-economic-cooperation-and-integration-asia-and>



<https://www.unescap.org/resources/kyrgyzstan-study-ict-deployment-along-transport-and-energy-part-1>

<https://www.unescap.org/resources/kazakhstan-study-ict-deployment-along-transport-and-energy-part-1>

**Ideas for Future Study
&
Master Plan 2023-2026**



<https://www.unescap.org/events/e-resilience-pandemic-recovery-intercountry-consultations-preparation-cictsti>



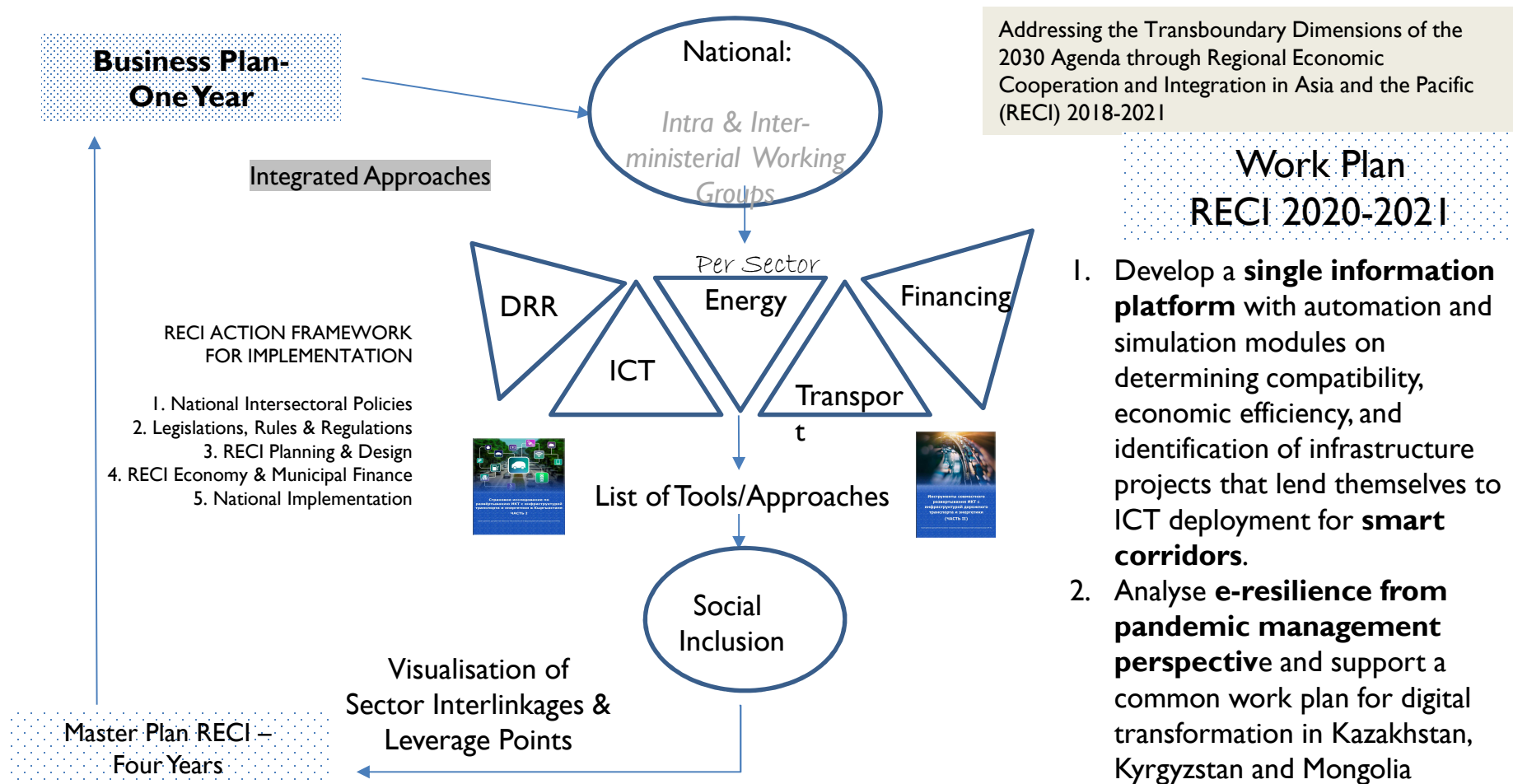
Perception-based survey on e-resilience readiness in RECI project target countries, by participants of the webinar of 3 July 2020

<https://www.unescap.org/sites/default/files/E-readiness%203%20July%2C%20survey%20%26%20evaluation.pdf>

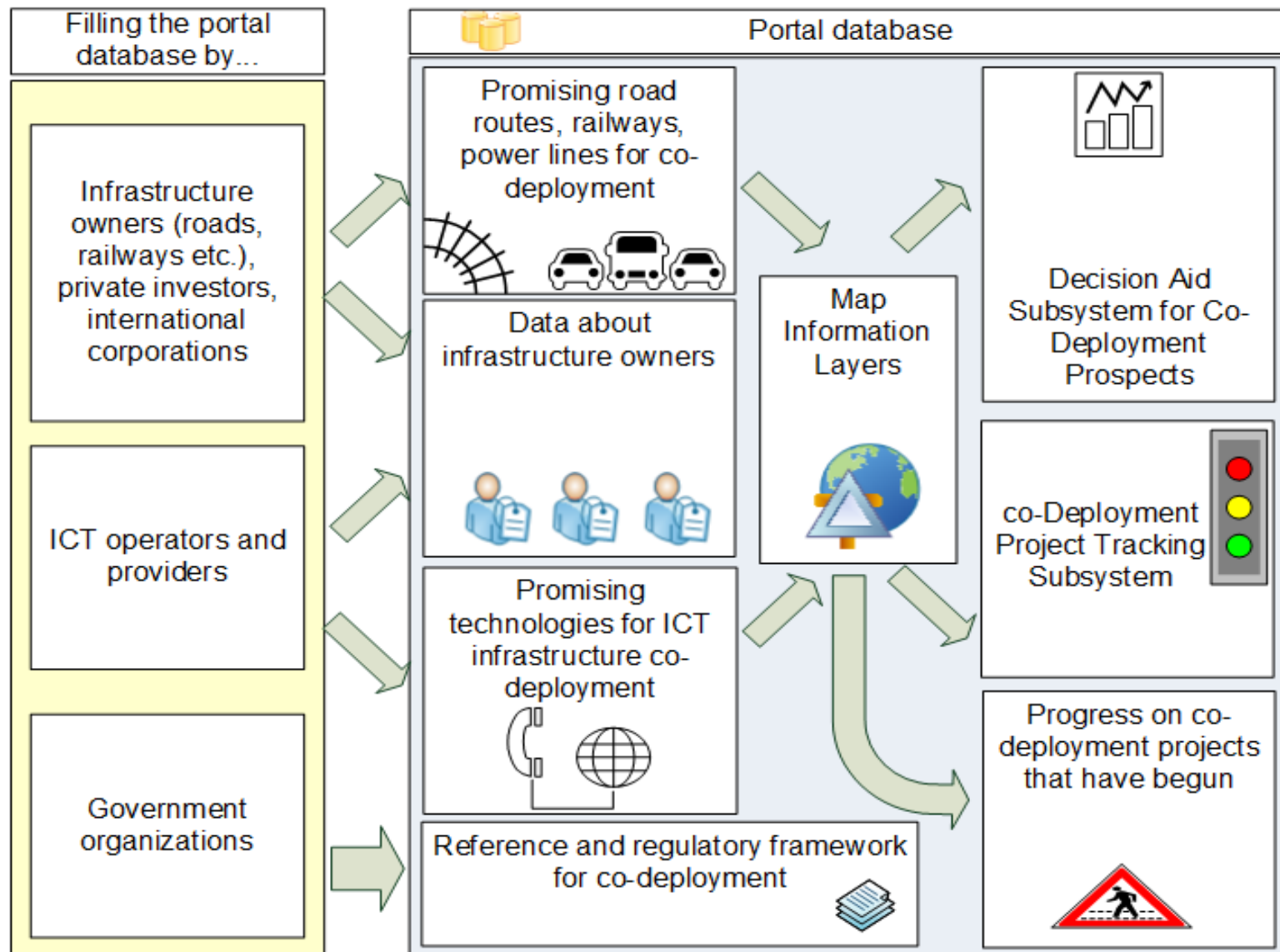


<https://www.unescap.org/events/speca-working-group-innovation-and-technology-sustainable-development>

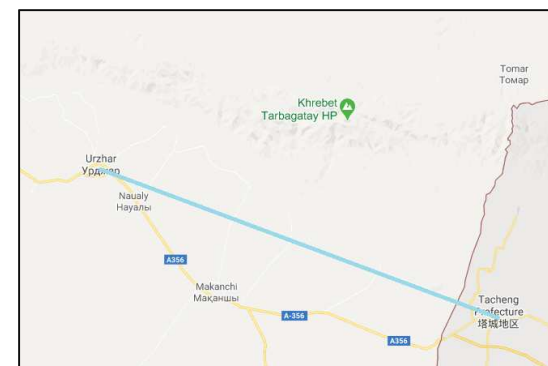
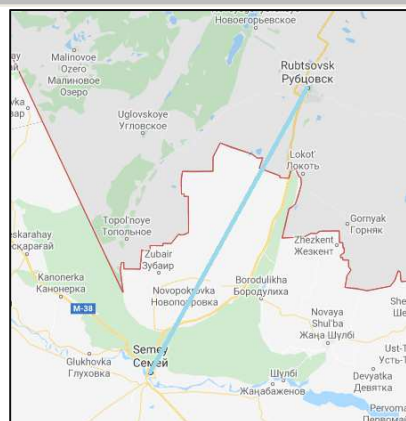
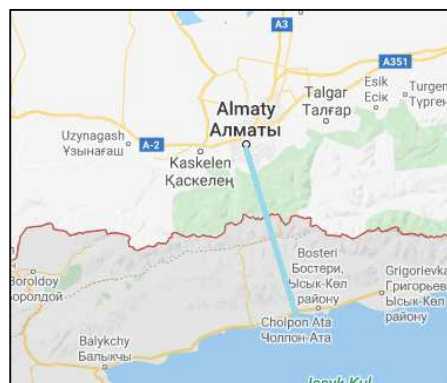
DIRECTIONS OF THE FUTURE STUDY



Generalized portal structure



Development of a calculation procedure and a simulation model to determine the development scenario of smart transport corridors (Kyrgyzstan-Kazakhstan-Mongolia)



Technologies

Building Code

Standards

Corridors

Population

Demand

Geodata

Infrastructure

Methodology

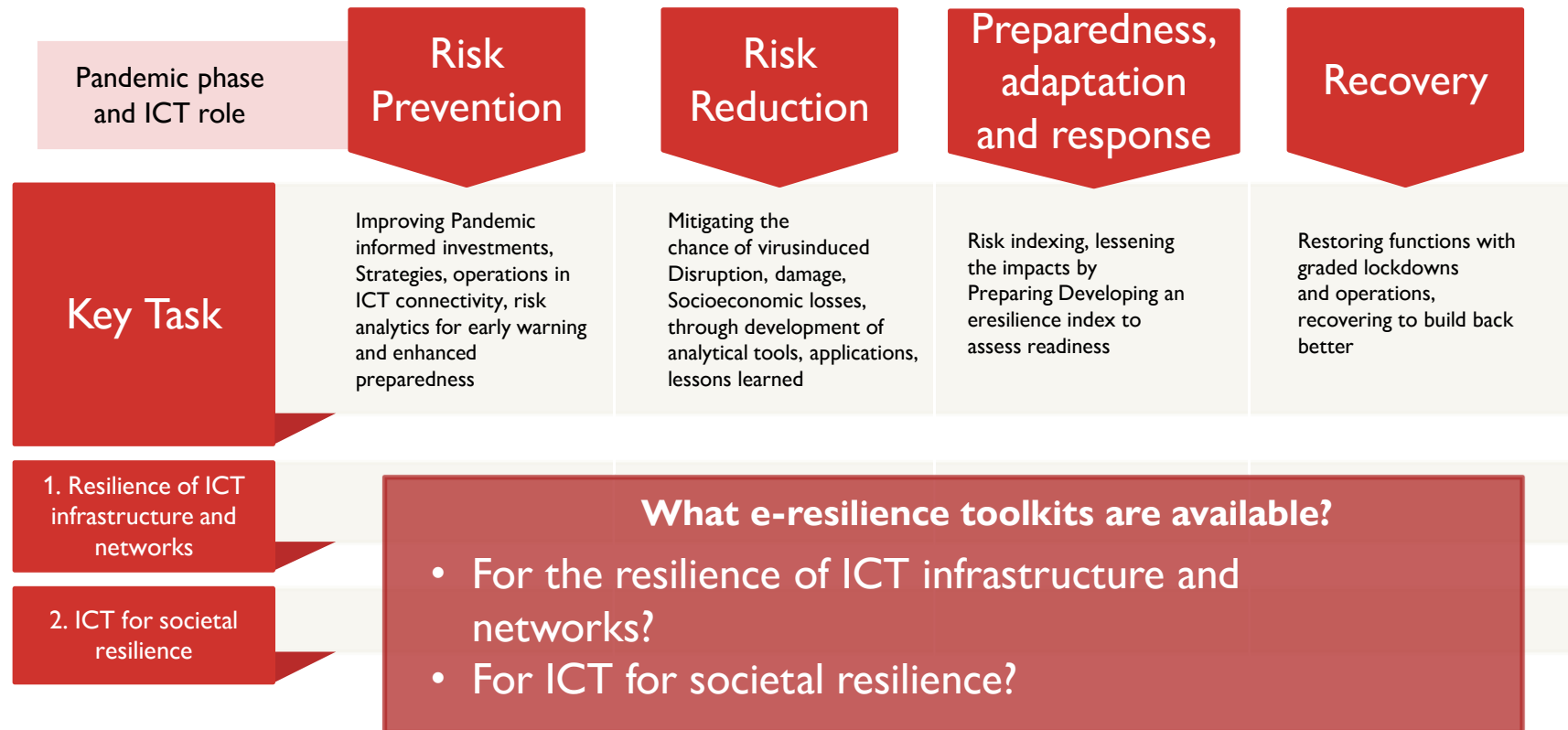
State of Economy

Prices

Labor Costs

Scenarios	CAPEX	OPEX	NPV
Scenario 1
Scenario 2
...
Scenario N

E-RESILIENCE FRAMEWORK FROM A PANDEMIC MANAGEMENT PERSPECTIVE



KEY IDEAS FOR MASTER PLAN 2023-2026

Based on results of events, surveys & studies 2019-2020

- 1. Portal on co-deployment.** To establish and further develop a **single informational portal on co-deployment** and infrastructure planning that will operationalize the methodologies and tools proposed by ESCAP and will improve cross-sectoral- information sharing and knowledge
- 2. Smart corridors.** To develop enhanced environment for creation and further development of **3 potential smart corridors** (Almaty (Kazakhstan) – Cholpon-Ata (Kyrgyzstan), Urjar (Kazakhstan) – Chuguchak (China), Semey (Kazakhstan) – Rubtsovsk (Russia)), including simulation modules on determining compatibility, economic efficiency, and identification of infrastructure projects
- 3. Training centres.** To establish **training centres** for building capacities on co-deployment and financing comprehensive and inclusive infrastructure solutions
- 4. Coordination activities.** To conduct **regular coordination activities**, as well as activities aimed at raising the awareness of leading specialists of relevant ministries and departments in such areas as deployment and regulation of broadband access; introduction of the most promising services and services based on broadband infrastructure; public-private partnership; stimulating investment in network infrastructure and the development of new services.
- 5. e-resilience monitoring.** To develop an **instrument to monitor e-resilience** and social aspect of digital preparedness, based on partnership with other interested organizations
- 6. Post-pandemic recovery.** To develop a **framework for the post-pandemic recovery period**, which may build upon the ESCAP toolkit on e-resilience from a pandemic management perspective
- 7. Regular surveys.** To continue practising regular delivery of **surveys with an increased number of respondents** surveyed to improve the quality of the sample answers under the study.

...Your ideas are very welcome ...



UNITED NATIONS
ESCAP

Economic and Social Commission for Asia and the Pacific

QUESTIONS?

ADDRESSING THE TRANSBOUNDARY DIMENSIONS OF THE 2030 AGENDA THROUGH REGIONAL ECONOMIC COOPERATION AND INTEGRATION IN ASIA AND THE PACIFIC

Kyrgyzstan & Kazakhstan Expert Consultations, 22-25 October 2019, Almaty



Summary of Policy Recommendations:

- To establish agreements and mechanisms to share data across country borders in the region to enhance infrastructure planning and support international collaboration
- To assemble inter-agency cooperation and ministerial coordination working group (WG) at a senior expert level.
- **To enable co-deployment and infrastructure planning, the government is encouraged to establish and further develop:** a clear legal framework, mechanisms and frameworks to share data on infrastructure, **a single informational portal that will operationalize the methodologies and tools proposed by ESCAP**
- To clarify the ownership distinction between the government and the private sector on operations, products and services
- To establish training centres for building capacities on co-deployment and financing comprehensive and inclusive infrastructure solutions

Enhancing ICT infrastructure resilience

Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives

Capacity-building

E-RESILIENCE FOR PANDEMIC RECOVERY: INTERCOUNTRY CONSULTATIONS IN PREPARATION FOR CICTSTI



Key Recommendations for the Way Forward for the ESCAP Secretariat:

- **To further develop the concept of single information portal on sectoral infrastructure projects with a goal of improved cross-sectoral- information sharing and knowledge**
- **Following the interest expressed on 3 potential smart corridors**
- To explore the possibility of developing an instrument to monitor e-resilience
- To explore the possibility to include the social aspect of digital preparedness
- To distribute eresilience perception based survey as widely as possible
- To develop partnership with other interested organizations
- To propose continuation of the ESCAP work on the project, and to take the recommended actions forward

Enhancing ICT infrastructure resilience

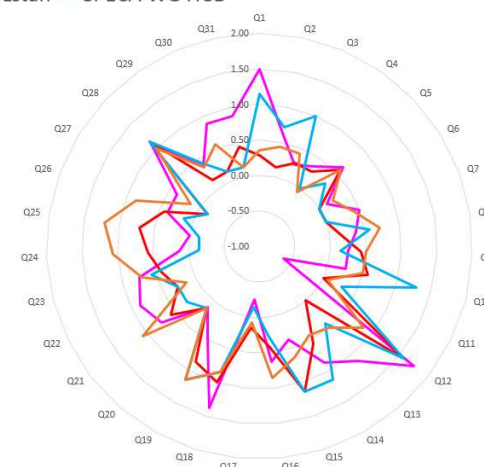
Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives

Capacity-building

SURVEY ON E-RESILIENCE POLICY RESULTS

- The survey results confirm that in terms of deployment policy and regulation, **all three countries** (Kazakhstan, Kyrgyzstan and Mongolia) **demonstrate a strategic interest and political will in the development of technologies and broadband access networks**. However, in some cases, weaknesses are the following – insufficient transparency, weak mechanisms of interaction between regulatory bodies (or a low level of their independence), which directly affects the feasibility of projects for the development of broadband access networks, as well as some declarative nature of strategic programs.
- In turn, **in terms of investment procedures and public-private partnerships, countries demonstrate the existence of legislation and strategic interest in such an organisation**, which can be considered their strengths. Weaknesses are – lack of confidence on the part of private investors, a low guarantee of predictability, and a relatively high level of corruption, which can affect the fairness of a particular decision.
- The most considerable correlation of answers is observed in the case of assessing specific issues, such as the level of modernity of the legislative framework. At the same time, when answering subjective questions (for example, about transparency or non-transparency of procedures), there were different opinions.
- Based on the observations, we conclude that it is necessary to:
 - **Conduct regular coordination activities**, as well as activities aimed at raising the awareness of leading specialists of relevant ministries and departments in such areas as deployment and regulation of broadband access; introduction of the most promising services and services based on broadband infrastructure; public-private partnership; stimulating investment in network infrastructure and the development of new services.
 - **Continue practicing regular delivery of surveys** with an increased number of respondents surveyed to improve the quality of the sample answers under the study.

— Average Mongolia — Average Kazakhstan
— Average Kyrgyzstan — SPECA WG ITSD



Legend

Scoring Points

-2: not ready (lowest)
0: neutral/reserved (I don't know)
2: very ready (highest)

Question Sections

Q1-9: ICT network infrastructure resilience
Q10-18: ICT for societal resilience
Q19-26: Policy and legal provisions for e-resilience against pandemic
Q27-31: Collaborative actions to harness technologies against pandemic

SPECA WORKING GROUP ON INNOVATION AND TECHNOLOGY FOR SUSTAINABLE DEVELOPMENT



Key Decisions:

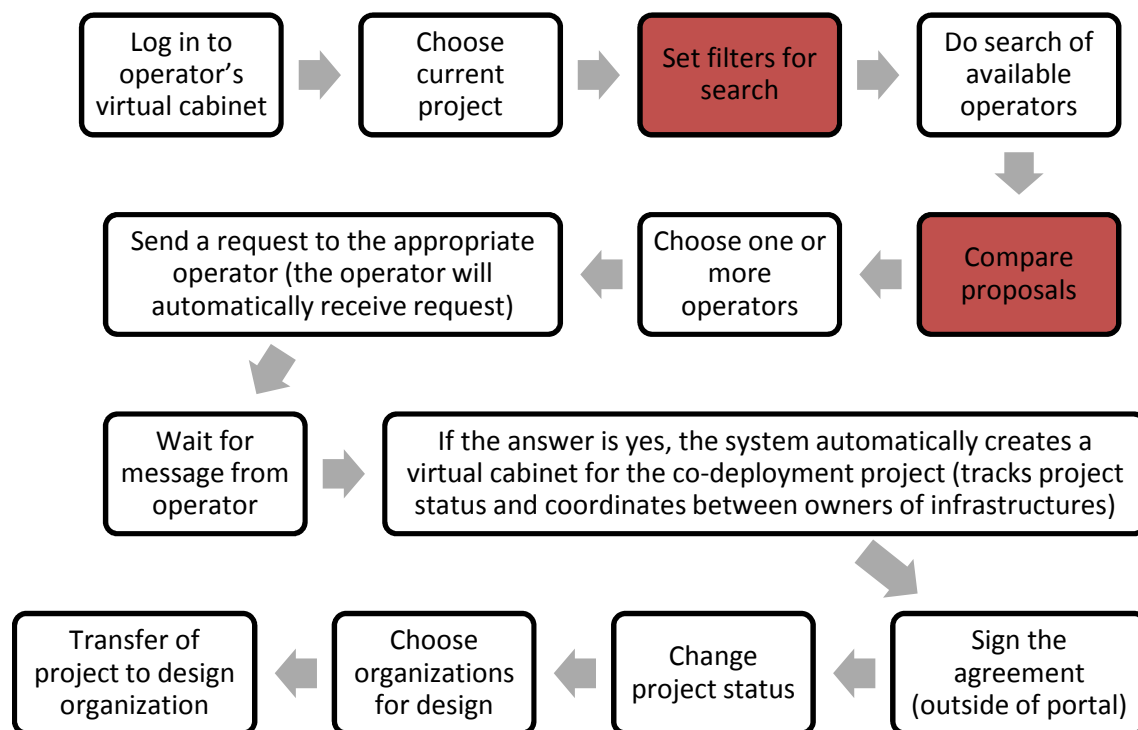
- to continue enhancing seamless digital connectivity and monitoring of e-resilience under AP-IS initiative that should guide the next phase in 2022-2024
- **to develop a single information platform with automation and simulation modules on determining compatibility, economic efficiency, and identification of infrastructure projects that lend themselves to ICT deployment for smart corridors**
- proposed to develop a framework for the post-pandemic recovery period, which may build upon the ESCAP toolkit on e-resilience from a pandemic management perspective
- to carry out a UNECE Innovation for Sustainable Development Review of Uzbekistan, building on the experience of previous reviews of Kazakhstan, Kyrgyzstan and Tajikistan

Enhancing ICT infrastructure resilience

Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives

Capacity-building

A generalized algorithm of actions for interacting with a single information portal



Development of a calculation procedure and a simulation model to determine the development scenario of smart transport corridors

Tools

investment fund
special economic zones
concessions
venture capital funds
venture capital companies
technology parks
federal targeted
investment programs
closed real estate mutual
investment funds

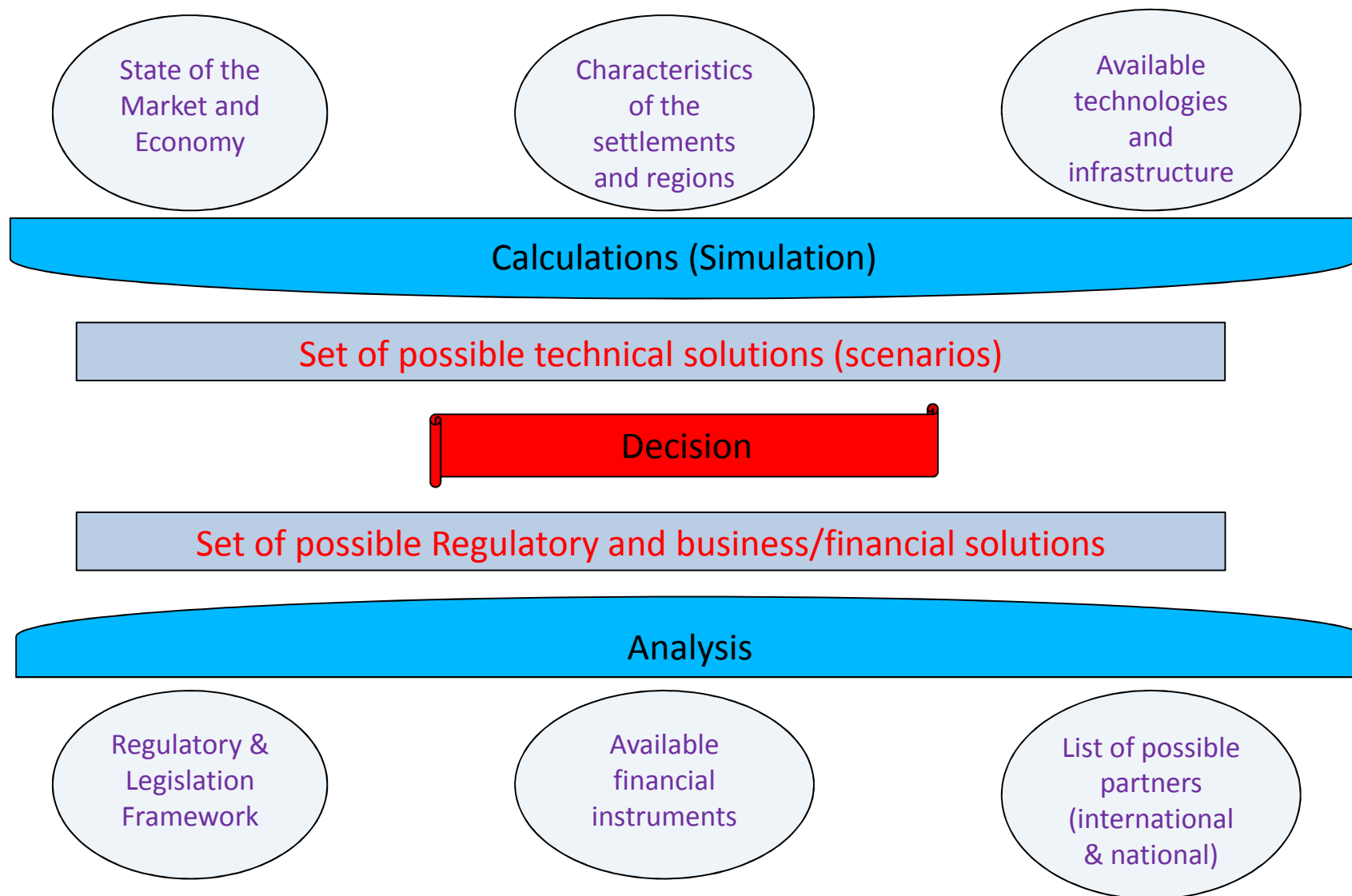
Means

tax benefits
development budgets
interest subsidies on loans
venture capital funds
crowdfunding platforms

Mechanisms

BOT (Build, Operate, Transfer)
BOOT (Build, Own, Operate,
Transfer)
BTO (Build, Transfer, Operate)
BOO (Build, Own, Operate)
BOMT (Build, Operate,
Maintain, Transfer)
DBOOT (Design, Build, Own,
Operate, Transfer)
DBFO (Design, Build, Finance,
Operate)

Development of a calculation procedure and a simulation model to determine the development scenario of smart transport corridors



The main attracters of smart corridors creation - I

	Almaty (Kazakhstan) – Cholpon-Ata (Kyrgyzstan)	Urjar (Kazakhstan) – Chuguchak (China)	Semey (Kazakhstan) – Rubtsovsk (Russia)
External outline of the project	Highland area, Issyk-Kul lake, Ile-Alatau national mountain park	Conceptually integrates into the international Trans-Siberian Railway and the Silk Road Economic Belt	Strategic importance for both intercountry and transit Eurasian traffic, incl. on the International Asian Network
Inner outline of the project	The longest cross-border route in the region for tourism and economic interaction	Traditionally established traffic of the local population for small and medium wholesale, visiting relatives, medical services. Tourism to Lake Alakol and Barlyk-Arasan springs	Development potential of passenger and cargo transportation with the involvement of China and Mongolia
Main purpose	Tourism	Transit of goods, mainly regional	Transit of goods, mainly transnational Eurasian traffic
Opportunities of the parties to finance the project	unequal, with the involvement of third-party investors	not very equivalent due to the wider opportunities of the China to attract foreign investors	unequal in terms of GDP of countries
Common motivators	Development of mutually beneficial cross-border cooperation in the regions; activation of international tourism and economic relations; socio-cultural interaction		
Common problems and risks	Uncertainty related to the duration of the COVID-19 restrictions; instability of the geopolitical field; foreign and domestic policy of the participating countries		

The main attracters of smart corridors creation - II

	Almaty (Kazakhstan) – Cholpon-Ata (Kyrgyzstan)	Urjar (Kazakhstan) – Chuguchak (China)	Semey (Kazakhstan) – Rubtsovsk (Russia)
Key Benefiters	legal entities: hotel and restaurant business, travel agencies, transport and service companies. individuals: tourists (by reducing travel time and costs), citizens of both countries (by creating new jobs)	legal entities: industrial, transport and service enterprises, trade, hotel and restaurant business (from Kazakhstan); individuals: local small and medium-sized businesses, tourists from the China, citizens of both countries (by creating new jobs and optimizing traffic in border areas)	legal entities: industrial, transport and service enterprises, transnational companies; individuals: local small and medium-sized businesses in the region, citizens of both countries (through the creation of new jobs and easier movement to third countries)
Opposition to the project	ecological (protected areas and permafrost zones); tourist (tour operators in Kazakhstan are lobbying for international tourism destinations)	social (labor migration and dumping at the price of labor from the China); possible political (if the geopolitical vectors of the participating countries change)	ecological (Semey belongs to the zone of increased radiation risk); foreign policy (sanctions and possible difficulties with transit traffic for third countries)
The main risks	insufficient volumes of tourist and business flows due to the low quality of services provided locally; difficulties of a topographic and climatic nature	insufficient traffic volumes due to the poor quality of some sections of the road and the availability of railway alternatives; expansion of business units and the population of China; lobbying the interests of external investors	political (toughening of sanctions in case of aggravation of the international situation); environmental - increased traffic can lead to environmental consequences