Smart City Minsk

project of high-quality digital transformation of the capital of the Republic of Belarus

Background:

- according to a report from the McKinsey Global Institute (MGI), today 600 cities determine the economic and technological development of the world;
- Smart City concept implemented in more than 2500 cities;
- with the help of a smart city, a country can make tourism and investment more attractive, can simplify urban life and government control;
- The Republic of Belarus is ready to implement the concept of smart city:
  - Belarus has a lot of qualified high-tech specialists,
  - in Belarus, there are enough companies that are able to implement Smart City in the most modern version,
  - Belarus has a ready-made legislative framework for digitalization of the city.

Smart City Elements:

1. Bike city	2. Smart tourist	3. Smart citizen	4. UP Platform
creation of the production of smart bicycles based on MotoVelo, as well as urban infrastructure and financial instruments for the convenience of bike using	development of a mobile application for tourism in Minsk with elements of augmented reality and fintech (payment for services through the application)	automation of city life, including: city transportation, food, administrative procedures, emergency care	development of a universal entrepreneurial platform to facilitate the accompanying business processes and the process of investment attracting

Smart City Elements:

5. Digitization of construction industry	6. Transport solutions	7. Environmental monitoring	8. Housing solutions
development of an electronic database (made on blockchain) of engineering networks and other elements of buildings, as well as digitization of the construction process	solutions to improve the convenience of transportation, including interactive stops, traffic regulation	sensors for determining the level of pollution, for the purpose of the safety of citizens and the subsequent cleaning of territories	solutions to improve the convenience of receiving and paying for utility and maintenance services

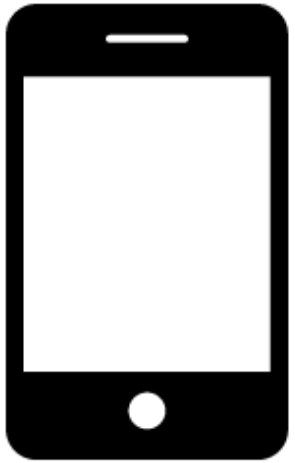
Smart City Elements:

9. City safety	10. Bonus system	11. Smart municipality
ensuring public safety through surveillance cameras, smart lights and an emergency call system	bonus system for rewarding citizens and guests for socially useful activities for the city of Minsk	automation of the city management system, administrative procedures, work with citizens' appeals, and local referenda

Single window

One of the important principles of the Smart City Minsk project will be the single-window principle:

- centralized project management,
- centralized fundraising for the project,
- the ability to access all city services (including in emergency mode) through a single mobile application.



To ensure the operability of this system, the city will be everywhere equipped with QR codes with a link to download the application. QR codes will also be issued to guests at the airport and railway station.

1. Bike city

launch of the production of new Belarusian bicycles

- maintenance
- financial instruments
- mining and advertising

universalism	environmental improvement	mining	3D printing	advertising
in warm time, the bike will replace other vehicles, in cold time, it will be an opportunity to convert it into an exercise bike or leave it in storage at the warehouse	this factor will not only improve the health of the nation, but also help to attract funds from financial institutions, as well as from private donors	the ability to recoup your bike (or pay its lease) and reimburse the road tax: due to mining equipment on the bike	subsequently it is necessary to introduce the production of bicycle parts on 3D printers	additional possibility of monetization of the bicycles by its owners: placement of holographic advertising on wheels

2. Smart tourist

booking and payment for accommodation

Minsk guide

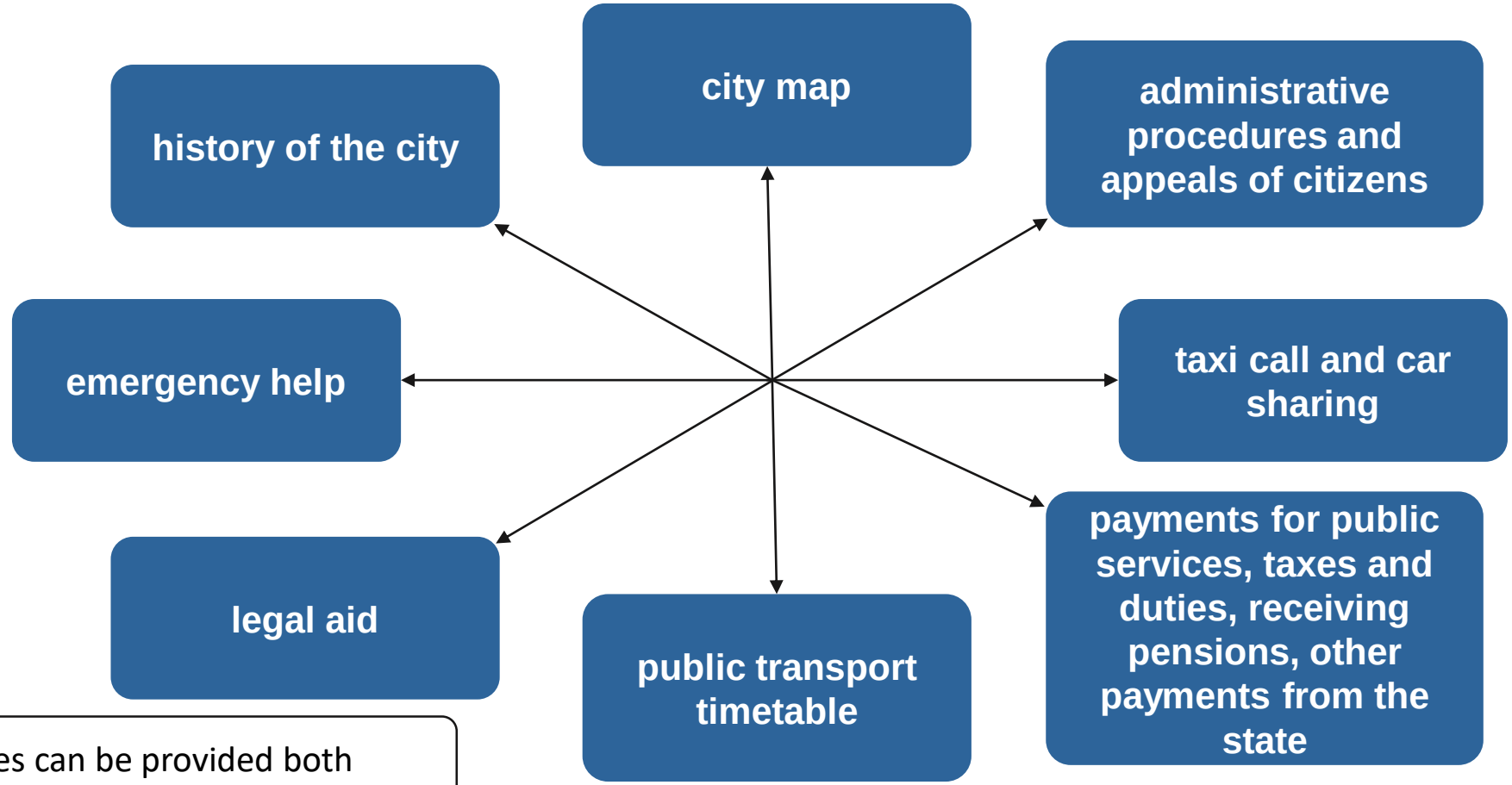
car rental / taxi call

emergency help

- online translator
- city map
  - description of the history of places
  - booking of vacation spots
- chat with other tourists
- order tour in Minsk
  - themed AR excursions
  - reservation of guide
  - individual tour
- calendar of events

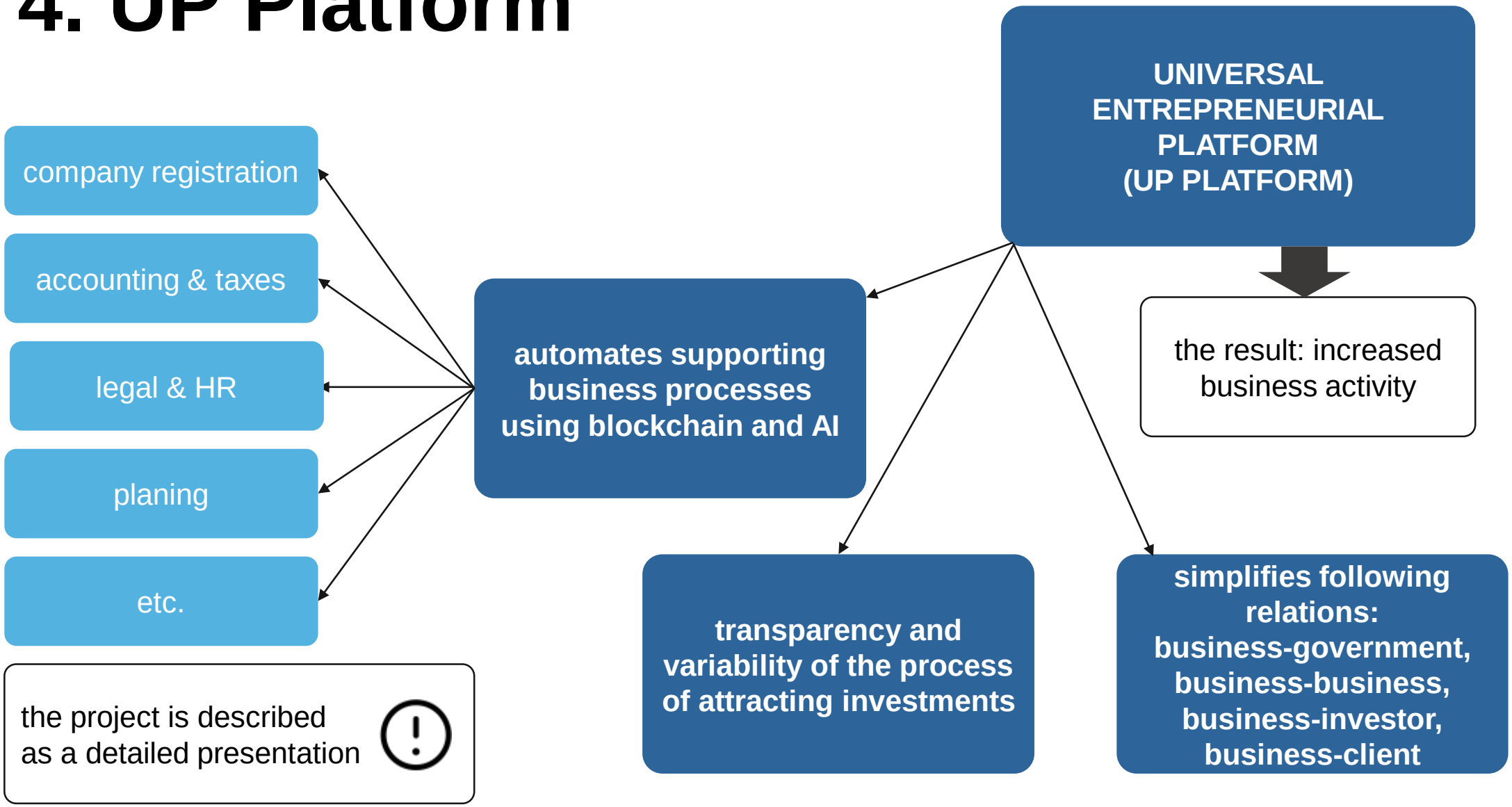
opportunity to rate places and services

3. Smart citizen



all services can be provided both through a personal gadget, and through a stationary tablet

4. UP Platform



5. Digitization of construction industry

Digitization of buildings means the creation of an electronic database on the blockchain with all the buildings of the city. The database will reflect the technical characteristics of buildings, utilities, suppliers of materials and equipment, contractors responsible for maintenance.

Digitization of construction is an application in the construction of an object survey by drones for the purpose of: monitoring the construction process, contractors, the quantity and quality of materials, as well as the subsequent entry of detailed information about the building into an electronic database on the blockchain.

Buildings will be surveyed using drones, which will ensure objectivity and interactivity in obtaining information.

The database will be developed on the blockchain (this guarantees the immutability and data security)

6. Transport solutions

Transport is an essential component of urban life. We present only some solutions for optimizing the operation of urban transport.

Interactive bus stop	Self-regulating transport	Smart traffic light
The smart bus stop is a convenient facility for waiting of vehicles and with the following capabilities: to purchase goods in vending machines, call a taxi, use WiFi, etc.	Transport, the flow of which is independently regulated due to the interconnection of vehicles, data on the number of passengers from interactive stops, data from smart traffic lights.	Traffic lights that control traffic based on the traffic situation in the city, as well as interconnected.

7. Environmental monitoring

Monitoring of abiotic environmental factors:

- ✓ temperature
- ✓ humidity
- ✓ atmosphere pressure
- ✓ fine particles PM 2.5
- ✓ ultraviolet
- ✓ haze pollution
- ✓ radiation
- ✓ weight
- ✓ dustiness
- ✓ total volatile organic compounds
- ✓ carbon dioxide
- ✓ etc.

Monitoring will be carried out using special sensors located throughout the city.

The data collected by the sensor will be provided to citizens through a mobile application, as well as displayed in special software for government agencies.

8. Housing solutions

Main solutions in the field of housing and communal services :

Smart metering	Waste management	Crowdsourcing
The use of smart meters allows you to: ensure transparent and efficient consumption of utilities, remotely and flexibly pay for them, remotely collect meter readings.	Development of a single application for the collection and sorting of waste for the possibility of improving the environmental situation and the processing of waste.	Creation of a platform (internal social network) to discuss local issues and problems with the ability to propose a specific solution. The platform will have separate social networks for all houses, residential complexes, housing estates, streets, districts, etc.

9. City safety

Smart lights	Surveillance cameras	Emergency help
Innovative lights with self-regulating lighting depending on the need for a specific section of the city. In addition to energy conservation, this technology allows for public safety.	Camera with artificial vision, for: security, crime prevention, traffic regulation, the formation of a database. Since this will be artificial vision, human rights will not be violated.	An emergency button (medicine, police, firefighters, etc.) will be present in the Smart City Minsk application and its subsidiary applications, as well as on stationary tablet-kiosks.

10. Bonus system

Bonuses in the form of tokens will be provided for advertising and mining within the framework of Bike City, and in addition for socially useful actions which a resident or a guest of the city does for Minsk and reports about which via the Smart City Minsk application.

The practical use of such tokens

- transfer to fiat with a fee
- payments inside the Smart City Minsk application
- investment in projects on UP-Platform
- accumulation and conversion into Smart City security tokens

11. Smart municipality

One of the important links of Smart City Minsk is the digital transformation of the city government system.

- software with uploading data from other Smart City units
- unified city database
- digital transformation of work with appeals of citizens
- digitalization of procedures and processes
- information storage optimization
- bots-helpers for citizens
- electronic public discussions
- local elections and referenda on the blockchain

Additional Smart City monetization options

introduction of innovations in other manufacturing enterprises of Minsk

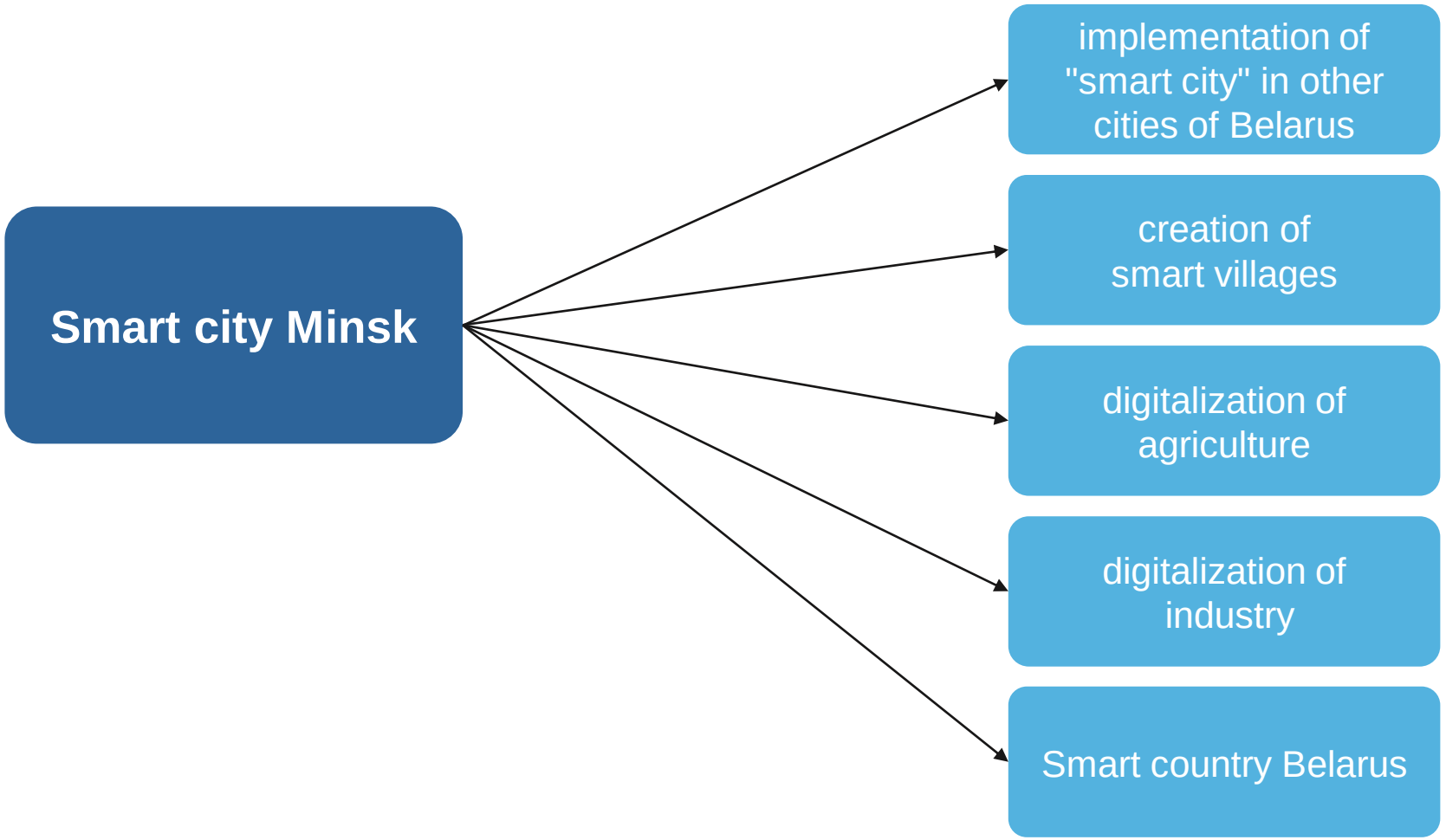
mass events for cyclists, tourists, investors

the creation of a training center on the topic of "Smart City" for foreign specialists

advertising in Smart City mobile applications, on smart infrastructure facilities, on smart bike wheels

proposal for the implementation of Smart City (or its individual element) to foreign cities as a turnkey service

Project development opportunities



Performer: Association Digit&Life

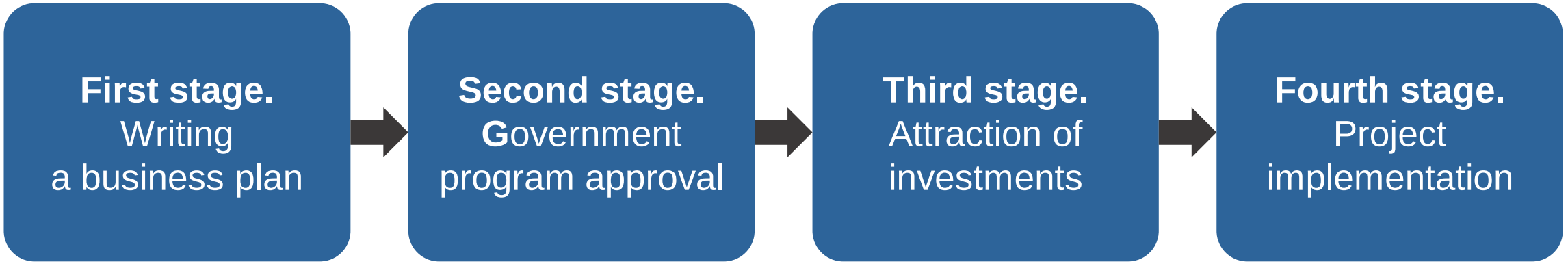
Association of digital transformation Digit&Life is a non-profit, voluntary alliancez of commercial and non-profit organizations with any type of activity permitted by the legislation of the Republic of Belarus, aimed at facilitating the transformation of social and economic processes using new technologies in order to increase their efficiency and comfort.

Performer: Association Digit&Life

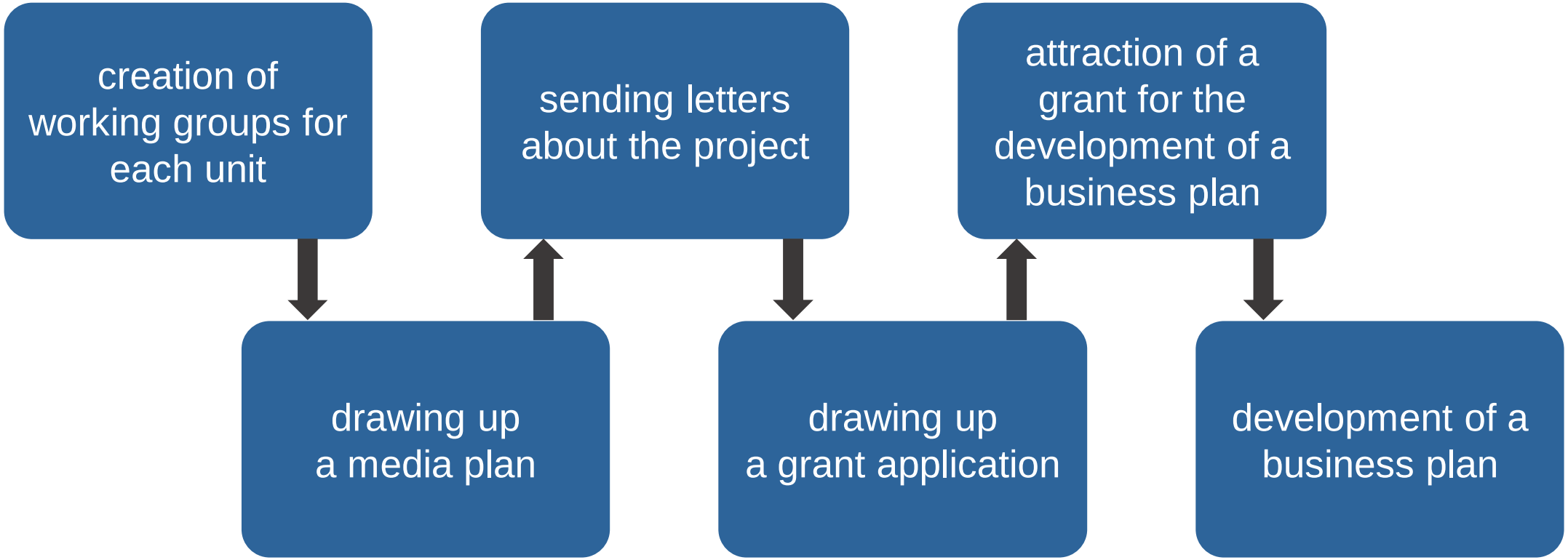
The following goals of activity of Digit&Life are fixed in Statute:

- support of the transformation of social and economic processes using new technologies in order to increase efficiency and comfort of such processes;
- support and development of software and hardware solutions aimed at improving the quality of life of people;
- support and development of cryptocurrency and blockchain technologies in the Republic of Belarus;
- support and development of artificial intelligence in the Republic of Belarus;
- support and development of the Internet of things in the Republic of Belarus;
- supporting the development of other high technologies.

General Roadmap



Roadmap of first stage



Working groups

Goals:

- detailed work with units;
- preparation of a grant request;
- preparation of the relevant section of the business plan;
- search for functional, software and hardware solutions for the implementation of a specific unit.

Working groups

The order of creation and operation:

- a working group will be created for the implementation of each unit;
- the working group will include employees of members of the Association, members of the Expert Council, members of the Management Board;
- working groups will be created based on the experience of individuals in various fields, as well as on the basis of the availability of ready-made solutions;
- during the work of the groups, the need for finding solutions and new project participants will be identified;
- the job of the working groups in writing of a business plan will be funded by a grant.

Media plan

Goals	Variants
• attracting new project participants • collecting feedback from the public • raising recognition of the project • creating an informational background for attracting investments	• publications about smart city • holding press conferences • members will mention their status on their own website, in interviews, during publications • media coverage of implemented projects related to smart city

Letters about project

Goals	Addressees
• to achieve support • to improve project • to increase the reputation of the project	• government bodies and organizations • Belarusian non-profit organizations with related activities • foreign associations in the field of digital transformation and smart city • potential members of the association • international financial institutions • educational institutions

Contacts

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Thanks for attention!