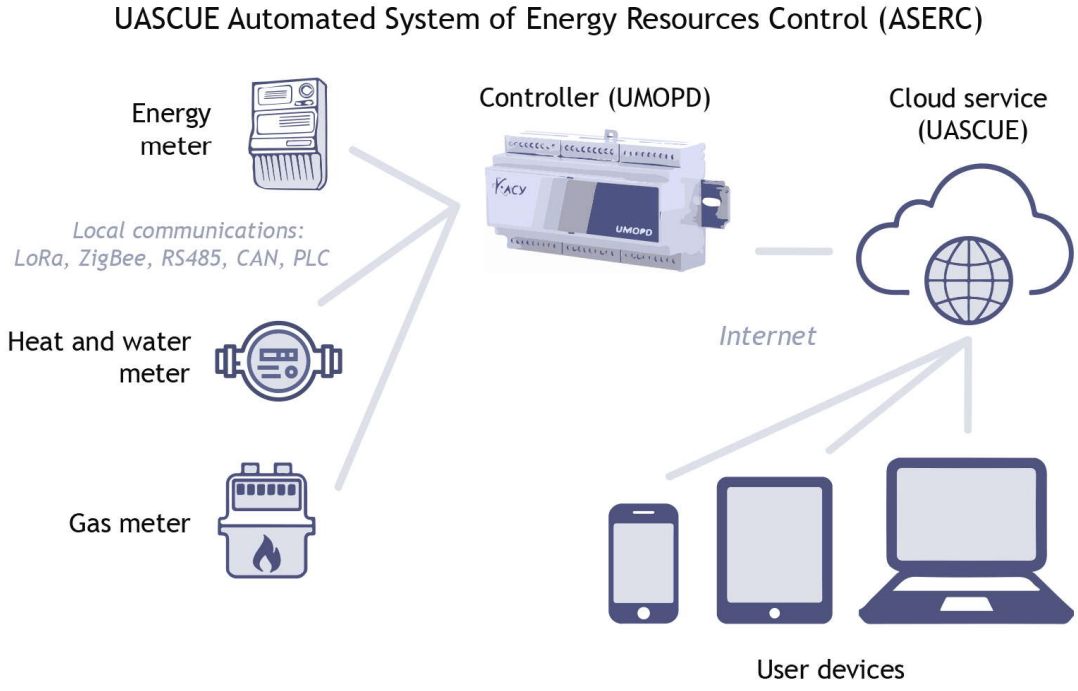
Universal Automated Control Systems

UASCUE Automated System of Energy Resources Control (ASERC)



UASCUE Automated System of Energy Resources Control (ASERC) for the utilities sector

Garden, cottage, garden non-profit partnerships

Management companies partnership of owners housing

Garage and housing building societies

Cottage (cooperative) without ASERC system

Submission by the owner
unreliable data
power consumption

Impossibility to identify causes
and places of underestimation
energy resources

High expenses

Discrepancy readings
consumption over 20%

All data is collected.
and processed manually

Cottage (cooperative) with ASERC system

Automated
data collection

Automatic alert
about unauthorized
interference

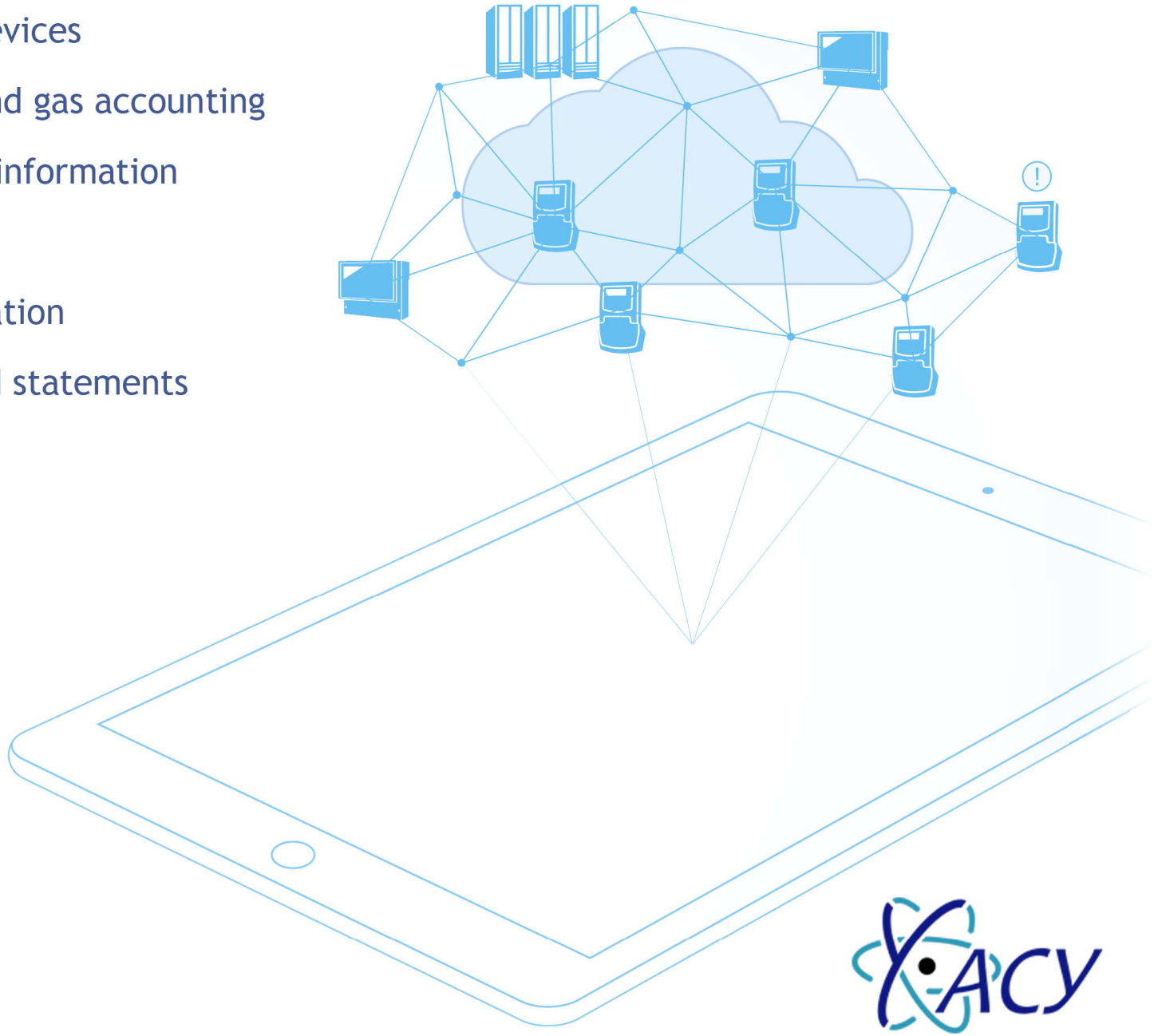
Cost savings

Discrepancy readings
consumption less than 5%

All calculations are carried out
by an automated system

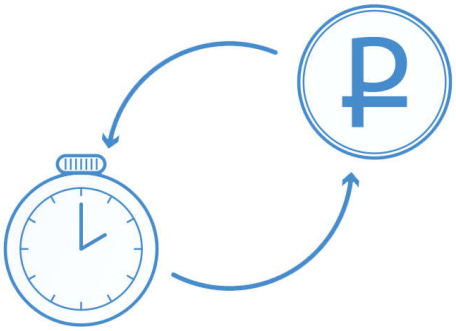
Benefits from the introduction of ASERC

- Support most metering devices
- Electricity, water, heat and gas accounting
- Centralized collection of information
- Remote control system
- Automatic system notification
- Generation of reports and statements
- Plotting by parameters



Approximate calculation of the payback ASERC system:

An example of the calculation of the payback of the implementation of the ASERC system for partnership (cooperative) when installing from scratch

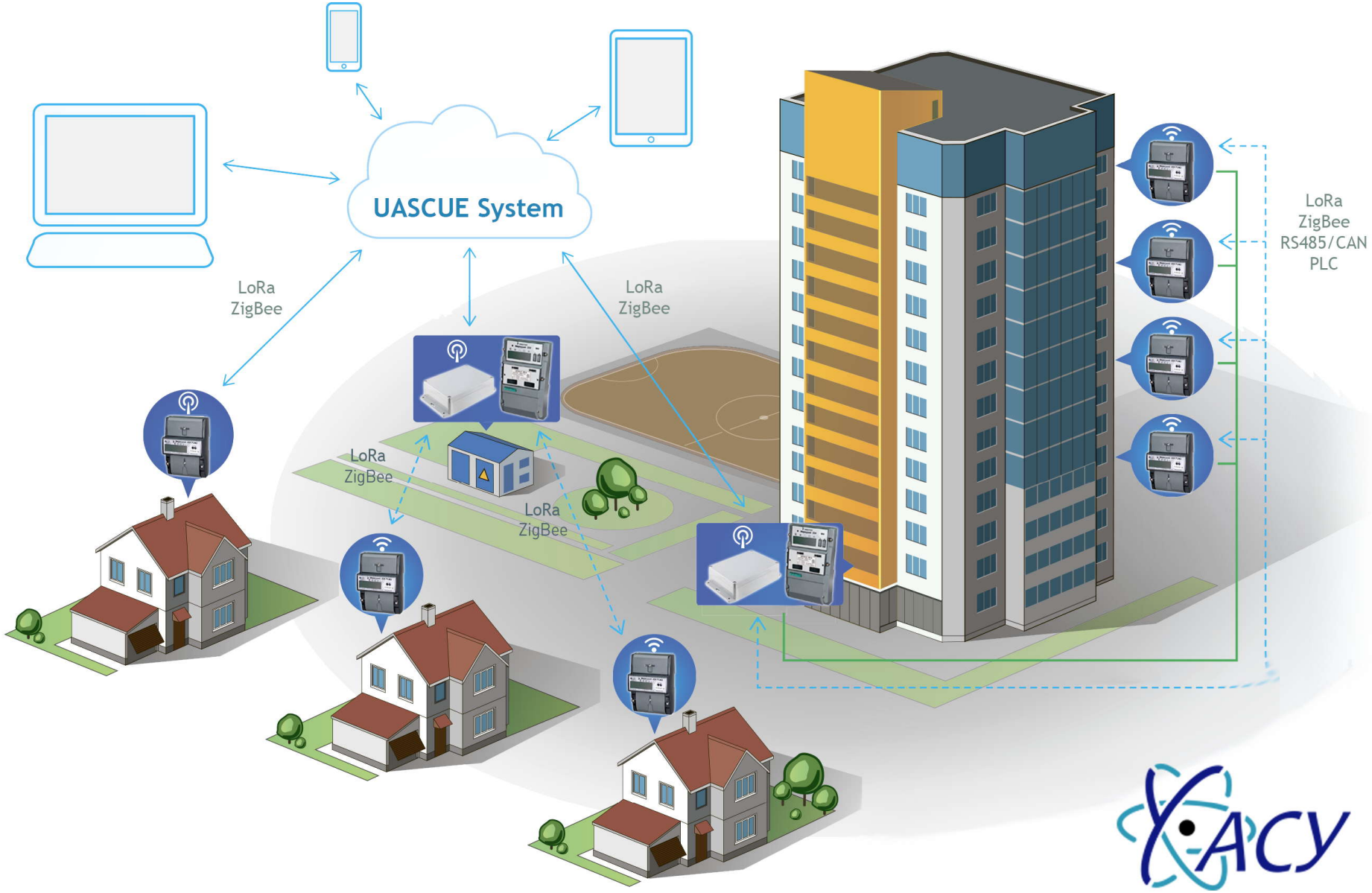


1. The cost of a system of 100 metering points is - 650,000 rubles.
2. The testimony of the balance device for the year - 350 000 kWh.
3. The sum of the testimony of consumers - 210 000 kWh.
4. The difference is - 140,000 kWh. (undercount 40%)
5. Tariff - 4 rubles / kWh.
6. Payback formula:

System Cost / (Difference * Tariff)

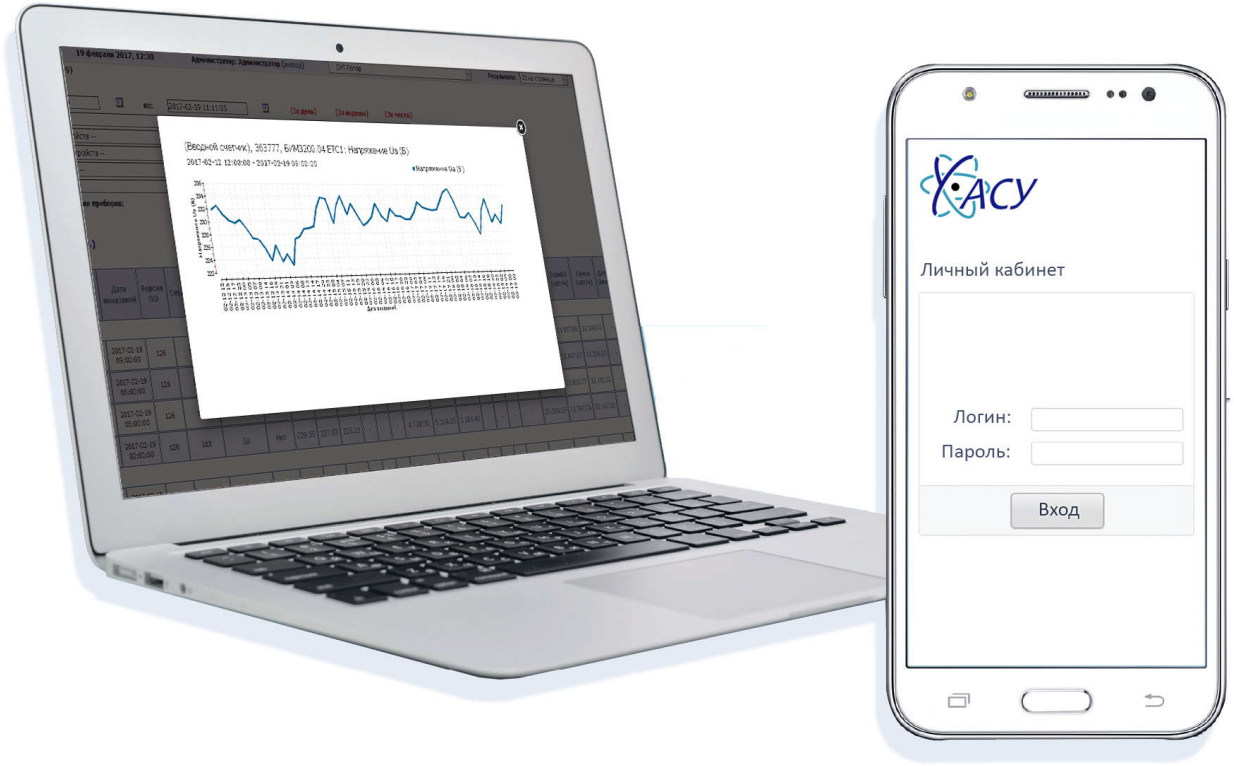
7. The payback period of the system is - 1.16 years.

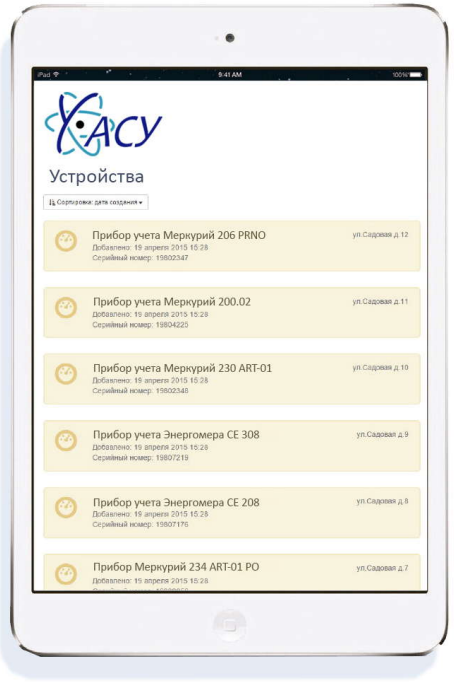
Typical scheme of construction of automated metering system LoRa, ZigBee, PLC, RS485 / CAN technologies



Cloud technology - the way to new opportunities

- Cloud technologies, access via the Internet
- Access from any device supporting WEB
- Automatic software update
- Collect readings in real time
- High reliability and fault tolerance
- Automatic backup and restore
- Savings on server hardware





Energy Accounting System UASU ASERC (UASCUE)

"UASCUE" for the user:

- user's personal account with access to metering data for the last year or more
- consumption expenditure control energy resources
- data transfer to a sales company

"UASCUE" for admin:

- personal administrator account with the ability to view technical information and equipment management
- export of reports and statements
- view event and error logs
- load limit management and consumption

Data Transmission Technologies

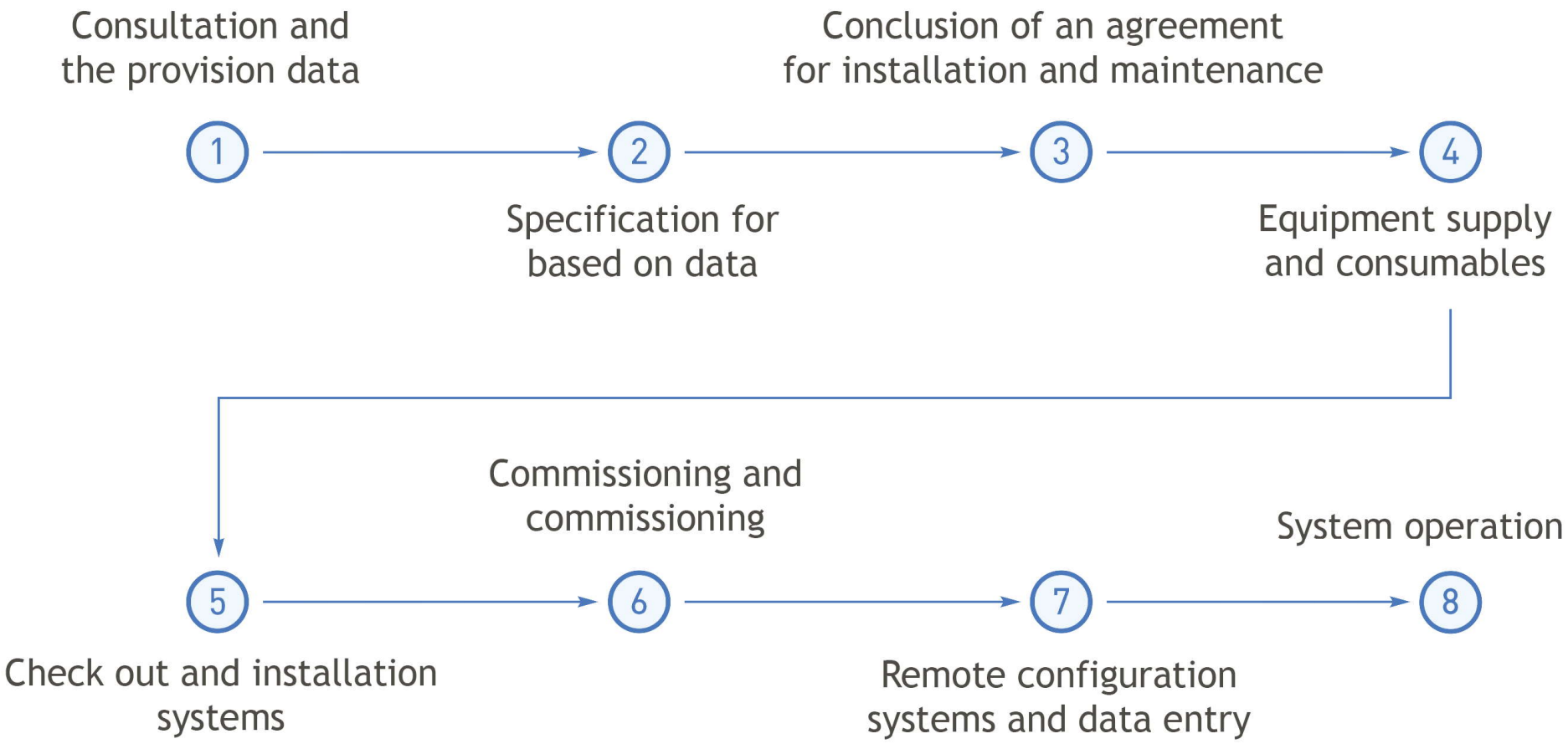
LoRa - sensitivity up to -137 dBm, output power up to 100 mW, communication channel budget is 156 dB. Range can reach up to 15 km. The ability to retransmit (repeat) signal for more distance (mesh).

ZigBee - data transmission over the air with speed up to 250 Kbps, at a frequency of 2.4 GHz with a cellular (mesh) structure, in which each device is a repeater.
The distance between nodes up to 1500 meters. Number of nodes in one segment up to 65,000.

RS485 / CAN - standard physical interface level.
Serial cable switching devices.
The number of nodes in one segment is 256.
The maximum segment length is up to 1200 meters.

PLC - data transmission over power lines on top standard alternating current frequency of 50 Hz or 60 Hz with speed up to 1 Mbps.

Algorithm for the implementation of the system



Use of automated system UASCUE ASERC

You can always get a free technical advice on the implementation
and operation of the system:

Hot telephone line:

+7-499-372-95-14

All issues related to work, acquisition
and the introduction of the system of automated system for commercial accounting of electricity, send it to the address: srv@uasu.ru