

**TECHNICAL SPECIFICATION FOR THE INSTALLATION OF SELF-SERVICE  
BAGGAGE DROP-OFF SYSTEM AND IT'S INTEGRATION WITH BAGGAGE  
HANDLING SYSTEM (BHS) AT KAUNAS AIRPORT**

## INDEX

1. CONCEPTS AND ABBREVIATIONS .....	3
2. SUBJECT OF PURCHASE AND QUANTITIES .....	3
3. LOCATIONS OF PERFORMANCE OF CONTRACTUAL OBLIGATIONS .....	6
4. IMPLEMENTATION STAGES AND TIMELINES OF PROJECT .....	6
5. GENERAL REQUIREMENTS FOR THE PURCHASE OBJECT .....	8
6. GENERAL REQUIREMENTS OF THE SSBD SYSTEM .....	10
7. FUNCTIONAL REQUIREMENTS FOR TECHNICAL EQUIPMENT .....	12
8. FUNCTIONAL REQUIREMENTS FOR SOFTWARE .....	14
9. TECHNICAL REQUIREMENTS FOR HARDWARE.....	15
10. REQUIREMENTS FOR EQUIPMENT INSTALLATION AND COMISSIONING SERVICES .....	18
11. REQUIREMENTS FOR TESTING .....	18
12. REQUIREMENTS FOR USER AND ADMINISTRATOR TRAINING .....	19
13. REQUIREMENTS FOR DOCUMENTATION .....	20
14. REQUIREMENTS FOR TRIAL OPERATION .....	21
15. REQUIREMENTS FOR TECHNICAL SUPPORT .....	22
16. REQUIREMENTS FOR PREVENTITIVE MAINTENANCE .....	23
17. REQUIREMENTS FOR ADDITIONAL IMPROVEMENT SERVICES.....	24

## 1. CONCEPTS AND ABBREVIATIONS

- 1.1. **Buyer** – JSC Lithuanian Airports, Rodūnios kelias 10A, Vilnius.
- 1.2. **Supplier** – economic entity, natural person, private legal person, public legal person, other organizations and their divisions or group of such persons with whom the Buyer signs the Contract.
- 1.3. **Goods** – Self-Service Baggage Drop-off (SSBD) equipment and their accessories.
- 1.4. **Services** – Installation, integrations with Ryanair and other airlines departure control systems (DCS), periodic inspections, maintenance, testing, updating, fault prevention work, and all related Services necessary to ensure the full operation and performance of the SSBD system. Project planning, analysis, delivering of Project documentation Services.
- 1.5. **Contract** – The agreement concluded between the Supplier and the Buyer regarding the Purchase object.
- 1.6. **SSBD (Self Service Baggage Drop-off)** – self-service baggage drop-off system.
- 1.7. **SSBD equipment/system/terminal** – self-service baggage drop-off equipment, including software and/or technical equipment and all related components necessary for full system operation.
- 1.8. **KUN** – JSC Lithuanian Airports Kaunas branch, Oro uosto g. 4, Karmėlava.
- 1.9. **KUN terminal** – an existing passenger terminal in Kaunas.
- 1.10. **PNR (Passenger Name Record)** – refers to a unique reservation record in an airline's database. It contains details about a passenger's booking, including passenger name(s), flight details (date, time, route, traveling class), other.
- 1.11. **BHS** – Baggage Handling System.
- 1.12. **DCS** – Departure Control System used by airline companies or other equivalent aviation companies used for baggage registration.
- 1.13. **SAT** – The Site Acceptance Testing (SAT) of the SSBD equipment is a process used to verify that the installed system meets the Buyer's purchase technical specifications and all other customer or user requirements. This test is performed at the installation site after system installation.
- 1.14. **IATA** – International Air Transport Association.

## 2. SUBJECT OF PURCHASE AND QUANTITIES

- 2.1. **Purchase object** –Kaunas airport self-service baggage drop-off system. Self-service baggage drop-off system (SSBD) will be installed in the departure terminal of Kaunas airport, including all technical and software equipment and its installation, and related Services.
- 2.2. The Buyer plans to install a two-step SSBD system in the reconstructed KUN terminal.
- 2.3. The Buyer plans to provide network equipment and server (if required) for the SSBD solution.
- 2.4. The Buyer ensures the provision of electricity and network cables to the SSBD terminals to be installed.
- 2.5. The purchase object includes:
  - 2.5.1. Preparation of technical documentation for the implementation of SSBD system.
  - 2.5.2. Development of SSBD integrations with baggage handling system (BHS), provided by ULMA handling systems.
  - 2.5.3. Development of integrations with Ryanair's and other airlines departure control system (DCS).
  - 2.5.4. Installation of software, testing and preparation for use.
  - 2.5.5. Production, assembly, installation, preparation for use, and launch of SSBD technical equipment according to the prepared and aligned technical documentation for the implementation.
  - 2.5.6. Training of users and administrators.
  - 2.5.7. Trial operation of the installed SSBD system.
  - 2.5.8. Technical and preventive maintenance of the installed SSBD system.
- 2.6. The Buyer buys Goods and Services specified in this Technical Specification, and the scope of the purchase object is defined in the following sections. The scope of the purchase object is presented in *Table 1*.
- 2.7. Goods/Services will be purchased as needed. The Customer plans but is not obliged to purchase all the Goods/Services listed in *Table 1* during the validity period of the Contract.
- 2.8. In the Purchase Proposal, the Supplier must detail the proposed technical and software equipment, sets of works, listing equipment, its manufacturers, versions in the submitted data sheets, and works and their quantities.

Table 1: Purchased Goods and Services

No.	Description of Goods/Services	Unit of measurement of Goods/Services	Maximum Quantity
1	2	3	4
	<b>KAUNO AIRPORT</b>		
1	<b>Design and project management</b>		
1.1	Project management, preparation of documentation, and related administrative services for KUN	set	1
2	<b>SSBD technical equipment</b>		
2.1	Bag tag printing device (terminal) is included in the kit with an integrated baggage tag printer, bag weight scales, means to identify passenger according boarding pass data (PNR), and other necessary equipment.	pcs.	4
2.2	Baggage drop-off unit complete with baggage tag scanner, weight measurement functionality and other necessary equipment.	pcs.	4
3	<b>SSBD software and integrations</b>		
3.1	SSBD software (main platform, including all necessary licenses, user interface, etc.) and its installation	set	1
3.2	Integration with the baggage handling system (BHS) for dispatching the bags	set	1
3.3	Integration with the scales at drop off conveyor for weighting the bags	set	1
3.4	Ryanair Departure Control System (DCS) integration	pcs.	1
4	<b>SSBD equipment preparation and installation</b>		
4.1	Installation, setup, connection, configuration, testing, and other related tasks of the self-service bag tag printing terminal equipment	pcs.	4
4.2	Installation, deployment, connection, configuration, testing, and other related activities of the baggage drop-off terminal equipment	pcs.	4

<b>5</b>	<b>Technical and preventive maintenance services</b>		
5.1	Maintenance and preventive services for the KUN installed SSBD system and related equipment, including periodic checks, servicing, testing, updates, fault prevention work, and supply of spare parts	years	5
<b>6</b>	<b>Integrations with departure control system</b>		
6.1	Integration with Departure Control System (DCS) for airlines	pcs.	4
<b>7</b>	<b>Additional services</b>		
7.1	Additional SSBD equipment improvement services (ordered as needed)	hours	200

**\*NOTE** The supplier must ensure all necessary software and/or technical equipment for the operation of the SSBD system, as well as all necessary Services, whether mentioned or not in *Table 1*. Accordingly, if additional software or technical equipment is required for the full operation of the SSBD solution, but is not mentioned in this Technical Specification, it must be included in the proposal price.

- 2.9. During project (further on – project) implementation, the Services provided by the Supplier include:
- 2.9.1. Preparation of the project plan.
  - 2.9.2. Communication with representatives of airlines (when the Buyer has confirmation of the airline's agreement to participate in the project).
  - 2.9.3. Communication and alignment of project details (hardware, software and other types of installation) with baggage handling system (BHS) supplier.
  - 2.9.4. Analysis and design of the SSBD system, preparation of analysis and design documentation and coordination with the Buyer.
  - 2.9.5. Preparation of SSBD system design documentation, component connection, and layout diagrams.
  - 2.9.6. Delivery and installation of all necessary equipment in designated locations (KUN terminal).
  - 2.9.7. Configuration/programming of integrations with the airport baggage handling system (BHS).
  - 2.9.8. Configuration/programming of integrations with airline systems (DCS). The integration must be completed within the terms specified in *Table 2*:
    - 2.9.8.1. The supplier must carry out the integration with Ryanair airline before the start of the Trial operation stage, to ensure that its passengers can use the SSBD service at the KUN terminal.
    - 2.9.8.2. Other potential airlines requiring integration during the execution of the contract will be agreed upon in the course of contract execution. The integration shall be performed within 4 months from the moment the Buyer informs that integration development works can be started.
  - 2.9.9. Full installation of integrations.
  - 2.9.10. Comprehensive testing of integrations and technical equipment and software, error correction, preparation of testing reports.
  - 2.9.11. Configuration, testing, connection, and launch of SSBD device technical equipment.
  - 2.9.12. Installation of required software and licenses and other work necessary to ensure smooth operation of SSBD equipment.
  - 2.9.13. Preparation and coordination of user and operating instructions with the Customer, conducting training for users, technical personnel, and administrators.
  - 2.9.14. Trial operation and error correction of the SSBD system.
  - 2.9.15. Technical maintenance, preventive maintenance, and support of SSBD system equipment.
  - 2.9.16. Completion of finishing restoration work if floors, walls, or other structures and/or equipment are damaged during the installation of the SSBD system.
  - 2.9.17. Other Services described in this Technical specification, as well as those not described but necessary to achieve the desired result.

2.10. When the term “works” is used in the Technical Specification, it corresponds to the definition of Services as set out in this Technical Specification.

### 3. LOCATIONS OF PERFORMANCE OF CONTRACTUAL OBLIGATIONS

3.1. Kaunas airport, Oro uosto g. 4, Karmėlava, Kaunas district.

### 4. IMPLEMENTATION STAGES AND TIMELINES OF PROJECT

- 4.1. Preliminary estimated stages and deadlines for the installation of the SSBD system are provided in *Table 2* below.
- 4.2. Payment for the provided Services, installed equipment, installed software, performed work, etc. will be made according to the procedure specified in the Contract.

*Table 2. Implementation stages and deadlines for KUN project*

No.	Stage name	Stage description	Completion deadline for the stage*
1.	Preparation of a detailed project implementation plan, project analysis and design stage	<p>Develop a project implementation plan that would cover project activities, their implementation timelines, responsible persons for activities, subcontractor roles and responsibilities, risk, quality, change and communication management plans. The plan must also show how the uninterrupted operation of the KUN terminal will be ensured during the implementation of the new solution.</p> <p>The Supplier shall perform an analysis of the Buyer's needs. The Supplier shall analyze the future installation sites, agree on a specific technical and software solution with the Buyer, provide recommendations for preparing the installation sites, and provide architectural, integration, and implementation diagrams/ drawings of the SSBD system elements for the solutions, align hardware and software integration scope with BHS supplier, installation and implementation details.</p> <p>The Supplier or the Buyer will have to receive a notification from Ryanair confirming that Ryanair is ready to carry out the necessary integrations with the Supplier for the provision of SSBD service at KUN airport. In the event that the notification is received by the Supplier, the Supplier must provide this notification to the Buyer as part of the documentation required for this stage.</p> <p>The above-mentioned documents shall be combined and coordinated with the Buyer, and this result shall be considered as the technical work project of the KUN SSBD system.</p>	No more than 3 weeks from the effective date of the Contract

2.	Equipment manufacturing and delivery	<p>Manufacturing of SSBD technical equipment and delivery to the installation site.</p> <p>The Buyer will inform about the start of this stage in a separate notification after the Supplier has fully implemented and coordinated with the Buyer the tasks and results of the Stage 1.</p>	No more than 2 months from a separate notification by the Supplier.
3.	Installation of software	<p>Installation of SSBD system software, including integration with baggage handling system (BHS). Preparation of test cases, testing, error fixing, and preparation of testing reports.</p>	No more than 2 months from the start of Stage 2
4.	Development of integration with Ryanair DCS	<p>Development and testing of integrations with Ryanair airline departure control system (DCS), ensuring it's use for passenger baggage drop-off in daily operations.</p>	No more than 2 months from the start of Stage 2
5.	Installation and testing of technical equipment	<p>Installation and testing of the technical equipment comprising the SSBD system. Preparation of test cases, testing, error fixing and preparation of a testing report.</p>	Within 2 weeks from the end of Stage 2
6.	Training of personnel	<p>Training of service personnel, administrators, and other staff</p>	Within 1 week from the end of Stages 3, 4, 5.
7.	Trial operation	<p>SSBD system trial operation, troubleshooting of identified issues, and delivery to operation</p>	<p>No more than 1 week from the end of Stage 6.</p> <p>A minimum of 7 calendar days should be allocated for the trial operation.</p>
8.	Technical and preventive maintenance, servicing	<p>Technical and preventive maintenance, servicing, fault troubleshooting, supply of spare parts, installation of updates, and other related Services are described in this Technical Specification</p>	<p>60 months from the date of signing the final acceptance/ delivery protocol with the Buyer for the installed SSBD equipment. The final acceptance/delivery protocol is signed after the completion of Stage 8.</p>
9.	Development of integration with airline DCS	<p>The Buyer informs the Supplier that the integration development process with the specified airline can be started.</p> <p>Development and testing of integrations with airline departure control systems (DCS), ensuring it's use for passenger baggage drop-off in daily operations.</p>	Not more than 4 months the Buyer's notification that integration development works can be started.

\* The deadlines for the stages may be extended in the cases and in accordance with the procedure provided for in the Agreement.

## 5. GENERAL REQUIREMENTS FOR THE PURCHASE OBJECT

- 5.1. This is a specification that defines the development, installation, operation, maintenance, and technical requirements of the SSBD system.
- 5.2. The supplier will be responsible for designing, selecting, manufacturing, and installing the SSBD system, ensuring its functionality, efficiency, and reliability, as well as all system interfaces to meet the requirements.
- 5.3. According to the scope of Goods and Services in *Table 1*, the supplier will perform the SSBD installation work in full scope (equipment installation, configuration, etc.) at KUN terminal. The SSBD equipment installation locations must be specified and coordinated with the buyer during the Project analysis stage.
- 5.4. The supplier must prepare and submit a detailed implementation plan for the Project by the deadlines provided in *Table 2* and follow it during Project execution. Documentation requirements are specified in Section 13.
- 5.5. The supplier must design and install the SSBD equipment within the specified timeframe. The equipment must comply with the technical specifications. The proposed solution must operate continuously 24/7 and provide the Services defined in the requirements.
- 5.6. Due to the supplier's fault in delaying the implementation of individual Project stages specified in *Table 2* or the Project plan agreed upon by the buyer and the supplier, the buyer has the right to apply penalties provided for in the contract to the supplier.
- 5.7. When installing, connecting, configuring, and testing SSBD technical equipment, KUN terminal operations must not be disrupted.
- 5.8. Only persons specified in the Supplier's tender may participate in Project implementation. The Supplier must appoint a competent Project Manager responsible for preparing the Project Plan, coordinating and managing the Project from the supplier's side, managing Project risks, changes, communication, and other Project management procedures and activities. Changing the Project team or subcontractor is possible only with the buyer's consent and after presenting personnel with equivalent experience and qualifications.
- 5.9. Weekly Project implementation reports must be provided. The report must indicate (but not limited to) the Project schedule, the Project status, work done during the reporting period, work planned for the next reporting period, identified risks, changes, causes of deviations from the original plan, and action plan. The exact method of report submission will be agreed upon during the analysis stage.
- 5.10. The supplier must participate in weekly meetings. These meetings can be MS Teams-type conference calls, live meetings, or Project site meetings as agreed separately if necessary. The frequency of meetings may change at the request of the buyer.
- 5.11. Supplier shall ensure that its employees or subcontractors comply with all KUN safety, security, and fire safety rules. Supplier shall enclose and protect the equipment installation/workplaces in those zones where the work interferes with the movement of passengers, as specified in the documents at this link - <https://www.ltou.lt/lt/apie-lietuvos-oro-uostus/tvarkos-ir-dokumentai/dokumentai-paslaugu-teikejams>. If necessary, the Supplier's personnel will have to obtain permits for work at the airport - <https://www.ltou.lt/en/business-services/lithuanian-airports-passes>. During the implementation of the Agreement, the Buyer will not provide escort services if the Supplier's personnel needs to enter the controlled zone. All costs associated with obtaining permits are covered by Supplier.
- 5.12. Supplier shall provide consulting Services for IT infrastructure technological capabilities, reliability, accessibility, development, and other issues during the entire SSBD equipment installation period.
- 5.13. Supplier shall communicate with airlines regarding the integration of the SSBD system with the DSC system, installed SSBD equipment accessibility via KUN network infrastructure (when the Buyer has confirmation of the airline's agreement to participate in the Project).
- 5.14. Supplier shall communicate with baggage sorting system (BHS) contractors regarding SSBD system integrations with the BHS system and scales.
- 5.15. The general principles that should be followed during the Project:
  - 5.15.1. Scalability - the SSBD equipment architecture and its implementation must support capacity expansion by adding additional technical equipment and/or software. The SSBD equipment must operate on a multi-layer architecture and be capable of integration at the level of individual layers.

- 5.15.2. Accessibility (time and location) - not less than 99.5% of the SSBD equipment must be technologically functional and ready to use 24 hours a day, 7 days a week, 365 days a year, including all SSBD components.
- 5.15.3. Technological simplicity - the proposed technology must consist of reliable, optimal and non-redundant solutions. Any specialist with an engineering education and training should find it easy to operate and maintain this System.
- 5.15.4. Privacy and security - the privacy and confidentiality of subjects (representatives of target groups) and their data is ensured by technological means. The essential principles of information privacy and security that must be implemented are:
  - 5.15.4.1. Confidentiality - confidentiality of transmitted and stored information.
  - 5.15.4.2. Integrity - integrity of transmitted and stored information.
  - 5.15.4.3. Non-repudiation - authenticity and provability of transmitted and stored information.
  - 5.15.4.4. Usability - evaluation of features that meet the end user's solution. It depends on how effectively the SSBD equipment helps to solve the required task, whether it is easy to learn and convenient to use.
- 5.16. All specifications presented must be considered as minimum requirements. Where precise values are specified, this means that they are minimum values (or maximum values, depending on the context - the proposed equipment must meet the required value or be better). If it is impossible to provide equipment of a certain level, higher-level equipment must be proposed.
- 5.17. In cases where this technical specification refers to specific models or sources of the procurement object, specific technological processes or trademarks, patents, standards, legal acts, types, specific origin or production, etc., it is considered that they are only indicative, and Suppliers may offer equivalent parameters but not inferior.
- 5.18. Examples or information detailing mentioned in the requirements are informational, i.e., they are not presented as finite lists and during Project implementation, they will need to be detailed and coordinated with the Buyer's working group.
- 5.19. The terms "must," "must be," "should be," "must have," "must allow," "must be able to," "must be created," used in the requirements presented, are equivalent and mean that the Supplier must design, manufacture, and assemble (or provide and assemble) corresponding functionality or level services, Goods, or equipment. Functionality that is specified in the future tense (will do, will allow, will include, etc.) indicates a state that must be implemented, and means that the Supplier must create and assemble (or provide and assemble) the corresponding functionality or equipment at the time of purchase.
- 5.20. All requirements specified in this technical specification are preliminary, therefore the implementation of the Project must be discussed, detailed, and formalized with the Buyer.
- 5.21. During the implementation of this Project, it is mandatory to plan the work in such a way that:
  - 5.21.1. The quality of the services provided by the airport is maximally ensured.
  - 5.21.2. During the installation, the systems used at the airport must be fully operational until the new SSBD system is installed and handed over to the Customer for operation.
  - 5.21.3. The development of needed integrations with DCS or other parties and software of the SSBD system must be installed in parallel with the production/installation of the equipment.
- 5.22. Tie-in works of SSBD installation must be coordinated by the Supplier with related construction works in respective SSBD sites. The Supplier shall take into account the schedules of related projects and provide consultations and recommendations on the completeness of future SSBD terminal installation sites, etc.
- 5.23. The Supplier must ensure cleanliness and orderliness in their work zone. After the completion of installation, the Supplier must remove all materials, debris, packaging from the Buyer's premises. Clean and tidy up the System installation site.
- 5.24. The protection of all assets and equipment acquired within the scope of this purchase until the day of signing the acceptance-transfer act is the responsibility of the Supplier.
- 5.25. The final acceptance of the SSBD system installation works at the KUN terminal may be signed after:
  - 5.25.1. The installation and configuration works are fully completed.
  - 5.25.2. The Buyer is satisfied that all technical and functional requirements are met.
  - 5.25.3. The equipment successfully operates without any malfunctions during a 7-calendar day trial period under real working conditions.

- 5.26. If during the testing of the SSBD it becomes clear that the Supplier specified an insufficient quantity of equipment and additional equipment not specified by the Supplier is necessary for the smooth operation of the SSBD system, the Supplier installs it additionally at their own expense.
- 5.27. The price proposed by the Supplier must include all necessary equipment and mechanisms for performing the work, installation, the Supplier's personnel work, materials, mounting-fastening materials, structures and foundations, work control and maintenance, launching, alignment, testing, team accommodation, equipment transportation to the installation location, customs clearance procedures (if applicable), tools necessary for the work, indirect expenses, taxes paid by the Supplier, profit together with the Supplier's reasonably anticipated risk, obligations and commitments defined in the Contract or arising from its execution.
- 5.28. All work that can be reasonably considered necessary for the complete installation work of the SSBD must be performed and included in the total price presented in the proposal, regardless of whether they are described in this document and its annexes or not.
- 5.29. The Supplier undertakes to implement, at no additional cost, all detailed technical and functional requirements (e.g., detailed rules for executing functions, etc.) that are to be specified. The Supplier's responsibility also includes addressing any deficiencies in the SSBD equipment or its implementation (including deficiencies in SSBD equipment security) identified during the proposal or analysis and installation work, if the Supplier uses concepts or abbreviations that differ from the Purchaser's concept or understanding, which will lead to an incorrect or incomplete understanding or implementation of the requirements.
- 5.30. The Supplier's proposal shall be deemed as the Supplier's commitment to install an SSBD system that complies with the technical specifications, including all necessary modifications, interoperability, and changes required to ensure the functionality specified during the execution of the Agreement.
- 5.31. All technical equipment specified in the proposal must be new, unused, of high quality, and comply with the requirements set out in European Union standards or national legislation. Technical equipment must have conformity marks, certificates, and manufacturer's declarations (CE).
- 5.32. All the technical equipment specified in the proposal must be sturdy, long-lasting, functional, and suitable for multiple cycles of use/work, and/or easily repairable and/or replaceable.
- 5.33. The Supplier must implement appropriate environmental measures to reduce the amount of waste generated during the provision of the Services and deliver these wastes for recycling. All used parts must be collected, sorted, and transferred to a waste management company.
- 5.34. The supplier is the manufacturer or official distributor of the proposed technical and software SSBD equipment, or an authorized representative of the manufacturer's distributor with the right to sell the proposed technical and software SSBD equipment, install it, and provide warranty and technical support services.
- 5.35. In case of discrepancies between the English and Lithuanian versions of this technical specification, the correct wording will be considered to be provided in the Lithuanian version.

## **6. GENERAL REQUIREMENTS OF THE SSBD SYSTEM**

- 6.1. During the Project analysis phase, the Supplier shall provide the Purchaser with recommendations for using the SSBD system based on good practices.
- 6.2. Only reliable and market-tested solutions and equipment should be used when deploying SSBD equipment. The SSBD equipment must be complete.
- 6.3. The architecture and layout of SSBD terminals should be designed so that all installed SSBD terminals can be used simultaneously, i.e., using one terminal should not interfere with using other terminals (including performance).
- 6.4. The precise layout of SSBD terminals must be chosen taking into account the layout of the room, evacuation routes, baggage handling system (BHS) parameters, and other factors.
- 6.5. All components of the SSBD equipment must be integrated with each other. All data exchange operations in one part of the SSBD equipment must be reflected in all related parts without additional actions by the SSBD equipment user. All proposed technical and software equipment for the SSBD must interact fully - compatibility of the different system components (printer, scanner, etc.) must be ensured. The Supplier is responsible for the final configuration and operation of the SSBD equipment.

- 6.6. To ensure proper operation of the SSBD, the Supplier must provide all necessary software and technical equipment. The system software must be fully compatible with all proposed SSBD equipment. The system's operational time should not be limited in duration, meaning that the software and technical equipment should continue to function even after the technical support period has ended.
- 6.7. The SSBD must ensure reliability, which means that it must be ensured, that the user cannot use the SSBD service if:
  - 6.7.1. They cannot print the bag tag if they do not have a valid boarding pass (PNR), if the baggage registration process has not started, or in other specified cases during installation.
  - 6.7.2. They cannot drop-off their baggage into the sorting system if it does not comply with the established rules (e.g., weight, dispatch time, etc.) or in other specified cases during installation.
- 6.8. The solution must provide the ability to switch between SSBD mode and the registration desk attendant mode. Both modes cannot operate simultaneously. The SSBD terminal must clearly indicate when it can be used and when baggage registration is performed by the attendant.
- 6.9. The conveyor belts with integrated scales are installed at the registration desks. The Supplier must integrate these conveyors and scales into the installed SSBD system. The baggage weighing procedure must be performed using these scales, and the value measured by them is used in SSBD processes.
- 6.10. Integration between the SSBD system (including each baggage drop-off terminal) and the baggage handling system (BHS) must provide for the transfer of the following information between the two systems (including, but not limited to):
  - 6.10.1. Information about the authorization to transfer baggage from the baggage drop-off terminal onto the collection conveyor of the baggage handling system (BHS).
  - 6.10.2. Information about the status and permission for operation of the SSBD baggage drop-off terminal.
  - 6.10.3. Information about the status of the baggage handling system (BHS).
- 6.11. Supplier will have agree with BHS supplier to transfer process for each bag - sequence, timings, conveyance of the bag till the collector conveyor, and safe injection of the bag on the collector conveyor.
- 6.12. For data transmission between the SSBD and BHS systems communication protocol or electrical signals can be used. The exact method of information transmission will have to be coordinated with the BHS system supplier during the Project implementation.
- 6.13. General requirements for the SSBD solution for KUN:
  - 6.13.1. A two-step SSBD system is installed in a dedicated space in KUN terminal.
  - 6.13.2. Verification process for checking valid reservation and baggage allowance by checking information with the airline's Departure Control System (DCS). This may be done by scanning and verifying a boarding pass or other equivalent method.
  - 6.13.3. At the bag tag printing terminal (1st step), the passenger is provided with guidelines for the process, baggage is weighted, bag tag is generated and printed.
  - 6.13.4. At the baggage drop-off terminal (2nd step), the passenger is provided with guidelines for the process, bag tag is scanned, baggage is once again weighed and injected to the baggage handling system (BHS).
  - 6.13.5. During the baggage drop-off process, data about the registered baggage unit must be transmitted to the baggage handling system (BHS), departure control system (DCS) and/or other systems.
  - 6.13.6. Before the baggage enters the baggage handling system (BHS), a baggage weighing procedure must be performed, and the measured value are compared with the values of minimum and maximum allowed weight set by the KUN airport and in the departure control system (DCS). If the measured value do not exceed the established limits and there is permission from the airline DCS to accept the bag - the baggage is accepted into the baggage handling system (BHS). If measured value exceeds the established limits and/or there is no permission from the airline DCS to accept the bag - the baggage cannot be transferred to the baggage handling system (BHS) and passenger must be given instructions on further actions.
  - 6.13.7. Software functionality for generating reports – device usage statistics, printed baggage tag statistics, dispatched baggage statistics by airline. All reporting functionality requirements are provided in Chapter 8.
  - 6.13.8. Functionality for sending information messages to the servicing personnel. In case of SSBD terminal failure/malfunction/stoppage, a signal must be transmitted to the servicing personnel - a light indication at the terminal and/or an electronic message with information about the location of the failure.
  - 6.13.9. Software administrative functionality.

- 6.14. The information provided for passengers should be as intuitive as possible, i.e. easily recognizable and understandable pictograms, animations, other signs should be used to avoid problems related to language barriers of passengers.
- 6.15. The information provided for user must be in Lithuanian and English language.
- 6.16. The SSBD system must be prepared for the development of new functionalities - e.g. new reports, functions, payment options, integration of new airlines, as well as for modification of existing functionalities. The SSBD software must be prepared for the addition of new SSBD terminals.
- 6.17. The SSBD software must support an unlimited number of SSBD devices, integrations with departure control systems (DCS) of airlines.
- 6.18. All SSBD equipment offered must be designed for 24/7/365 use.
- 6.19. SSBD terminals must be constructed and assembled in such a way that technical equipment can be easily replaced by the Buyer's technical maintenance personnel within 2 hours of a breakdown. The design must provide access to technical equipment without dismantling the device from the installation site.
- 6.20. The necessary constructions and materials must be included in the equipment for securing the SSBD terminal to the base. Materials resistant to corrosion, including fasteners, must be used for securing to the base.
- 6.21. Error messages provided to SSBD equipment users (including passengers) must be informative and provide sufficient information for further actions (such as error correction or prevention).
- 6.22. If the SSBD terminal screen is used to provide information must be option to choose the language of information display - Lithuanian or English. The screen must properly display Lithuanian language special characters.
- 6.23. The supplier of technical maintenance and service must provide and use the latest versions of software during the maintenance period and ensure uninterrupted operation of the SSBD equipment.

## **7. FUNCTIONAL REQUIREMENTS FOR TECHNICAL EQUIPMENT**

### **7.1. REQUIREMENTS FOR THE BAG TAG PRINTING TERMINAL (KUN 1st STEP)**

- 7.1.1. Before the passenger prints the bag tag, the verification of the authenticity of the passenger's reservation (including baggage allowance) must be performed based on the passenger's boarding pass (PNR) data. At the bag tag printing terminal, the passenger must be provided with relevant information, such as where and how to perform the actions, where to perform scanning/data entry actions, information about the progress of the process, when the baggage tag is printed and how to attach it to the baggage, warnings about an incorrectly performed operation, etc. The final list of information messages for passengers must be provided and agreed with the Buyer during the implementation of the Project.
- 7.1.2. Scales has to be provided to determine the weight of baggage. Scales is considered as part of the SSBD terminal.
- 7.1.3. Any device used for passenger's boarding pass scanning must be able to scan a boarding pass with a barcode that complies with the IATA 792 (boarding pass barcode) standard, a QR code, or other equivalent markings when presented in a paper or mobile device format (on the screen of a mobile device).
- 7.1.4. The external parts used for the scanning must be resistant to scratches (including scratches caused by passengers' jewelry, phone holders, etc.).
- 7.1.5. To confirm the passenger's data (PNR), the SSBD equipment must receive flight reservation information from the departure control system (DCS) or other equivalent equipment or service used by the airline. The passenger's boarding pass is suitable for using the SSBD service when information about the confirmation of the flight reservation (the passenger's boarding pass is valid) is obtained from the DCS (or other equivalent equipment or service used by the airline) and baggage allowance for drop-off.
- 7.1.6. When the SSBD software checks the passenger's boarding pass (PNR) and determines that the passenger cannot use the SSBD service, a notification with an explanation of what mismatch was detected must be provided to the passenger. The specific method of information presentation will be coordinated with the Buyer during the Project analysis stage.
- 7.1.7. If the passenger's boarding pass (PNR) is valid, the passenger is allowed to use the SSBD service and is given the opportunity to perform the bag tag printing procedure. The bag tag printing procedure must be started automatically after the passenger confirms the information displayed on the screen.

- 7.1.8. Passengers must have the possibility to confirm or cancel the accuracy of the flight information presented. Upon the passenger's confirmation that the presented information is correct, an instruction indicating the actions that the passenger must take after confirming or canceling the information must be displayed on the screen.
- 7.1.9. The information required for bag tag generation must be obtained from the departure control system (DCS) of the airline or other equivalent equipment and/or services used by the airline.
- 7.1.10. The SSBD equipment shall not print a baggage tag if the boarding pass is invalid or in other cases agreed upon during the Project analysis stage. In such a case, a message shall be provided to the terminal user with the identified discrepancy and recommendations for further action.
- 7.1.11. The bag tag must be printed only for the identified baggage unit(s) of the passenger. One bag tag must be assigned to one baggage unit.
- 7.1.12. The bag tag must comply with IATA or equivalent standards.
- 7.1.13. The bag tag printer must be calibrated for printing tags of different lengths. The length of the bag tag is to be agreed with the Supplier during the Project analysis stage.
- 7.1.14. The bag tag printer must print both standard bag tags (which require removal of the protective adhesive layer) and liner less bag tags (without a removable protective layer). The type of bag tag is to be agreed with the Supplier during the Project analysis stage.
- 7.1.15. After completing the bag tag printing procedure, information about further actions is provided: instructions for attaching the baggage label and directions to the baggage drop-off terminal.
- 7.1.16. The total cycle time of the bag tag printing terminal - all data is scanned and valid, the passenger prints the bag tag without problems - should not exceed 30 seconds, including the time from the passenger presenting the boarding pass for scanning to the final printing of the bag tag.
- 7.1.17. The amount, format (graphic/text/dynamic information) and order of detailed information presented, as well as the operation processes and sequence of operation of the terminal equipment, must be edited and finally reconciled during the Project implementation process.

## 7.2. **REQUIREMENTS FOR BAG DROP-OFF TERMINAL (KUN 2nd STEP)**

- 7.2.1. SSBD devices must be designed in such a way that in cases where the SSBD cannot be used for certain reasons (e.g. malfunction, registration is done through an agent), there is the possibility to use the check-in counter in the standard way, where passengers and their luggage are registered by a ground handling agent.
- 7.2.2. Once the passenger has placed the baggage on the transport conveyor, the baggage drop-off procedure begins. The precise procedure for baggage drop-off and the content of information provided are aligned with the Purchaser during the Project analysis stage.
- 7.2.3. The SSBD terminal must be equipped with an bag tag scanner. The scanner must read the standard bag tag with a barcode (1D and 2D) when it is correctly attached to the checked luggage.
- 7.2.4. The bag tag scanner must read the visible barcode on the bag tag regardless of its orientation.
- 7.2.5. During the screening and transfer process, the bag tag is scanned, and the received information is compared to the information obtained from the departure control system (DCS).
- 7.2.6. At the KUN terminal, there are transport conveyors with integrated scales installed near the check-in counters. The supplier must integrate these conveyors and scales into the SSBD system being installed. The baggage weighing procedure must be performed using these scales, and the weight of the baggage measured by them is compared with the allowed baggage weight value of the passenger obtained from the departure control system (DCS). The actual baggage weight value is transmitted to the departure control system (DCS).
- 7.2.7. During the luggage parameters verification process, the SSBD equipment must receive and process the weight of the passenger's luggage from the departure control system (DCS). The SSBD equipment must transmit the actual measured data to the departure control system (DCS).
- 7.2.8. If discrepancies are detected between the baggage weight and the values identified from the passenger's boarding pass (PNR), or if other circumstances are detected that prevent the baggage from being transferred to the baggage handling system (BHS), an information message with information about the discrepancies and instructions for further passenger actions is provided for the passenger.
- 7.2.9. If no discrepancies are detected between the baggage weight and the values identified on the passenger's boarding pass, the SSBD equipment transfers the luggage to the baggage sorting system (BHS). An informational message about the successfully delivered luggage is provided for the passenger.

- 7.2.10. During the transfer to the baggage sorting system (BHS), the SSBD terminal uses auxiliary transport belts to transfer the baggage onto the BHS conveyor belt. The SSBD system must ensure safety, avoid collisions with other luggage, and control the movement of the BHS conveyor belt only for the period necessary for the luggage to enter the sorting room.
- 7.2.11. After the passenger completes the baggage drop-off procedure and the baggage has been successfully transferred to the baggage sorting system (BHS), a baggage delivery receipt is printed or a receipt that meets IATA requirements is provided by the Supplier or airline electronically using its technological solutions.
- 7.2.12. After the successful delivery of the baggage by the passenger, the SSBD terminal returns to the beginning of the usage cycle, that means it is allowed to carry out the process of delivering new passenger baggage.
- 7.2.13. The average total time for a baggage delivery terminal cycle (assuming the passenger has good SSBD usage skills, understands the process and can smoothly execute the actions instructed on the screen) is no more than 45 seconds, including the time from the moment the passenger places the luggage in the designated location on the conveyor belt until the luggage is received into the baggage sorting system (BHS), and all data is scanned and correct.
- 7.2.14. The amount, format (graphic/text/dynamic information) and order of detailed information presented, as well as the operation processes and sequence of operation of the terminal equipment, must be edited and finally reconciled during the Project implementation process.

## **8. FUNCTIONAL REQUIREMENTS FOR SOFTWARE**

- 8.1. The software must be complete and operational at least at one airport.
- 8.2. The SSBD system software should be installed on a machine provided by the Supplier at the KUN terminal (on the server – on premise solution) or in the environment used by the Supplier (i.e. data center, cloud platform). The software should have multi-airport functionality.
- 8.3. The Supplier must provide and install all licenses required (if necessary for the implementation of the solution) for the operation of SSBD equipment (software, system software, and technical equipment, if necessary).
- 8.4. SSBD equipment licenses must be valid indefinitely. Licenses must not restrict SSBD equipment users, data exchange, and operations scope.
- 8.5. SSBD software must be accessible using the latest versions of Mozilla Firefox, Google Chrome, and other equivalent popular web browsers.
- 8.6. The software should be open for the creation of new functionality (e.g., new reports, functions) and modification of existing ones.
- 8.7. Information search, data verification in the database, report generation, and fault review for selected period of time must be performed in real time.
- 8.8. There should be a possibility to inform the service personnel by email when the baggage label roll or other critical failures are exhausted according to the set parameters in the printer (exact parameters and list of notifications will be discussed and set during the implementation phase of the Project).
- 8.9. Access to statistical data of each individual terminal's usage (number of uses, usage time, duration, etc.), notifications about planned maintenance, transmission of malfunctions to servicing personnel, and the ability to monitor and control the status of each terminal in real-time (malfunctions, printer status, remaining paper rolls, etc.) must be provided.
- 8.10. Data in the system must be viewable from various perspectives (by time period, terminals, airlines, baggage data, etc.). All baggage information (e.g., baggage deliveries per hour, day, by airlines, etc.) must be stored in the database for further analysis and report generation. The report content must be aligned with the software installation stage.
- 8.11. Using SSBD software, it should be possible to generate reports and present selected data graphically (Dashboards) from real-time operations and historical data of SSBD devices.
- 8.12. The system should have options to view, filter, and group data according to specified parameters (filters and grouping parameters used in the search should be detailed and coordinated with the Purchasing Entity during the analysis stage).
- 8.13. The SSBD software must have reporting and configuration functionality:
  - 8.13.1. Number and weight of delivered baggage units (by period, by airline, etc.).

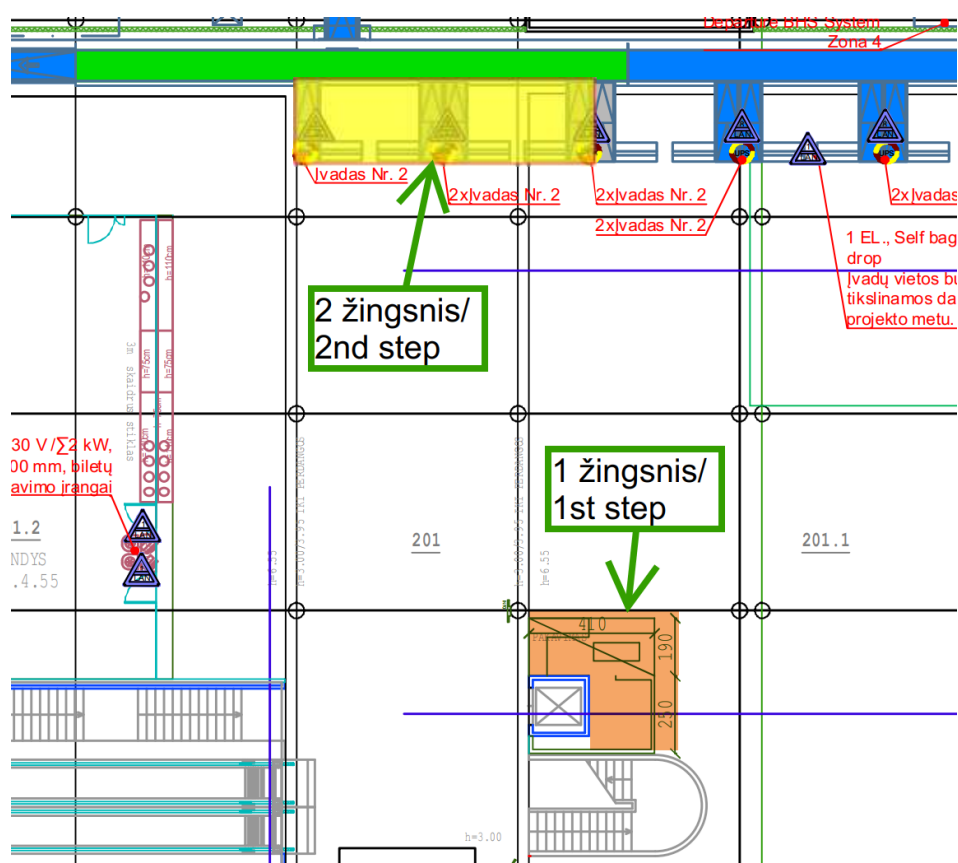
- 8.13.2. Number and weight of rejected baggage units (by period, by airline, etc.).
- 8.13.3. Statistical information for a period (daily, weekly, monthly, yearly, or other selected).
- 8.13.4. Report on baggage labels printed (by period, by device, etc.).
- 8.13.5. Terminal usage cycle statistics (number of cycles, cycle duration information, etc.).
- 8.13.6. The final list of reports should be coordinated during the Project Implementation.
- 8.14. The software should allow for flexible creation of new report templates and editing of existing ones.
- 8.15. The software should allow for exporting selected data. Export principles (data forms, fields, scopes, formats, etc.) should be coordinated with the Purchasing Entity during the analysis stage.
- 8.16. The software should allow for viewing all reports on the screen, saving them on a computer, printing them.
- 8.17. The software should have the ability to generate reports with specified parameters automatically (without user intervention). Reports are generated according to a specified time schedule, which should include a periodic function (e.g. generate a report every Monday at 00:00). The generated reports in the selected format are uploaded to the specified electronic memory location (machine, disk location, directory) and/or sent via email as an attachment to the specified recipients.
- 8.18. The SSBD software should support expandability by connecting additional hardware, i.e., SSBD performance should be easily increased by adding additional technical resources without changing the source code of the software. The increase in technical hardware capabilities should be carried out without interrupting SSBD work as much as possible.
- 8.19. The administrator must have the ability to remotely connect to the SSBD software.
- 8.20. The SSBD system must have a diagnostic module that provides the administrator with continuous monitoring of the SSBD hardware status and the ability to perform preventive maintenance tasks without interruption.
- 8.21. The SSBD system administrator should be able to view SSBD equipment malfunctions, including server or device malfunctions in the SSBD administrator environment.
- 8.22. The SSBD system administrator must have the ability and tools (including but not limited to):
  - 8.22.1. To monitor the performance and status of SSBD equipment.
  - 8.22.2. To monitor and manage system alerts about intrusions, unauthorized access, failures, etc.
  - 8.22.3. Administration of user groups and users – creation, deletion, editing.
- 8.23. The SSBD system proposed by the supplier must have monitoring functionality, including but not limited to the ability to monitor and control the configuration parameters of each SSBD device, remote terminal on/off switching.
- 8.24. Data transmitted between the client-server and back-end platforms must be encrypted (especially login credentials and any sensitive data).
- 8.25. During SSBD software operation, it must be constantly updated, i.e., the Supplier must provide all software and system software updates and fixes to timely resolve security gaps and operational software errors. The installation of updates should not cause significant disruption to the operation of the SSBD equipment and should not require the system to be re-deployed. This is relevant for all SSBD software components, including client and server components.

## **9. TECHNICAL REQUIREMENTS FOR HARDWARE**

### **9.1. REQUIREMENTS FOR THE BAG TAG PRINTING TERMINAL (KUN 1st STEP)**

- 9.1.1. The construction of the bag tag printing terminal must be modular, meaning it should be possible to install additional devices to the bag tag printing terminal, expand the functionality of the SSBD system (e.g. new features, new integrations with external systems, etc.).
- 9.1.2. The bag tag printing terminal must be made of durable materials (stainless steel, anodized aluminum, painted steel/aluminum, etc.), and their surfaces must be sturdy, easy to clean, and maintain. The color of the device should be coordinated during the Project analysis stage.
- 9.1.3. The proposed terminals must be new and unused.
- 9.1.4. The width of the bag tag printing terminal must not be larger than 760 mm, height not larger than 1500 mm, depth not larger than 600 mm.
- 9.1.5. The operating temperature of the bag tag printing terminal should be between 10-30 °C.
- 9.1.6. The electrical supply voltage of the bag tag printing terminal should be 200-240V, with a maximum power consumption of 1kW.
- 9.1.7. The bag tag printing terminal must have the following components (including but not limited to):

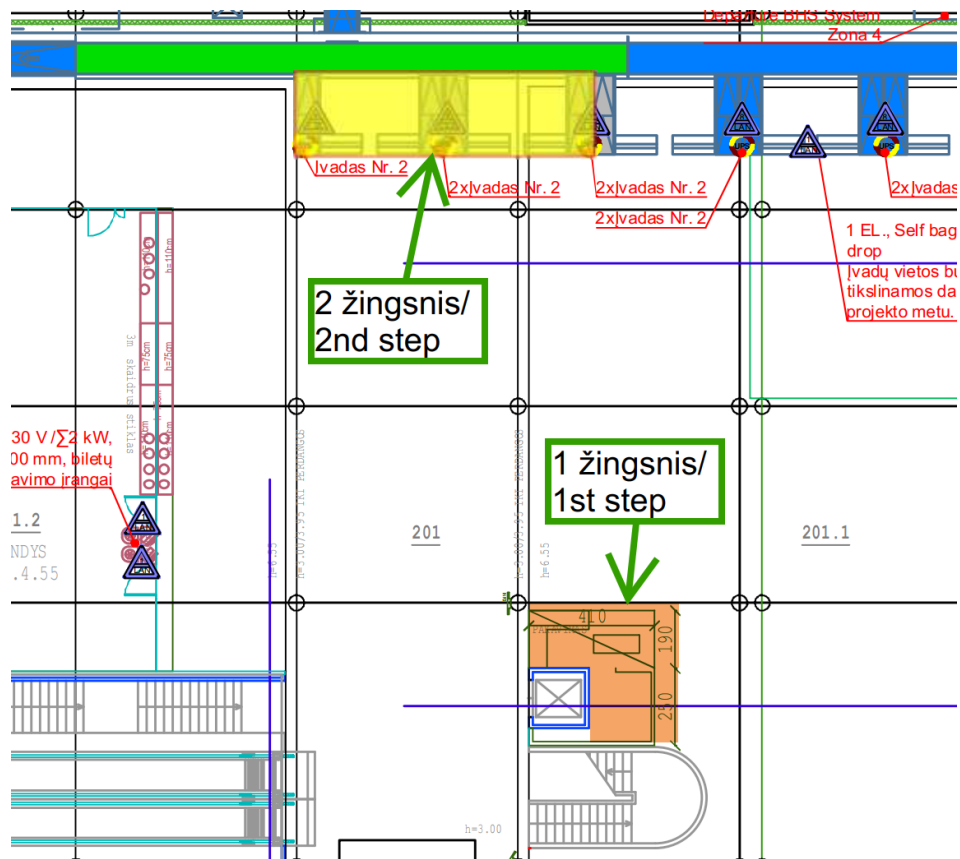
- 9.1.7.1. An integrated bag tag printer capable of printing standard bag tags of different lengths (which require the removal of a protective adhesive layer for attachment) and liner less bag tags.
- 9.1.7.2. A color touch screen of no less than 5 inches diagonal.
- 9.1.7.3. Scales for determining the weight of baggage. Scales must be metrologically verified and certificates for verification have to be provided.
- 9.1.7.4. Other technical equipment necessary to ensure the functionality of the SSBD system described (cables, power sources, network equipment, automatic switches, etc.).
- 9.1.8. The bag tag printing terminal screen must not be lower than 1000 mm in height. The specific height of this terminal equipment must be agreed and confirmed during the Buyer's Project analysis stage.
- 9.1.9. Preliminary location of the terminals installation area in KUN – orange marked area (the exact installation location and method must be agreed upon with the Buyer during the Project analysis stage):



## 9.2. REQUIREMENTS FOR BAG DROP-OFF TERMINAL (KUN 2nd STEP)

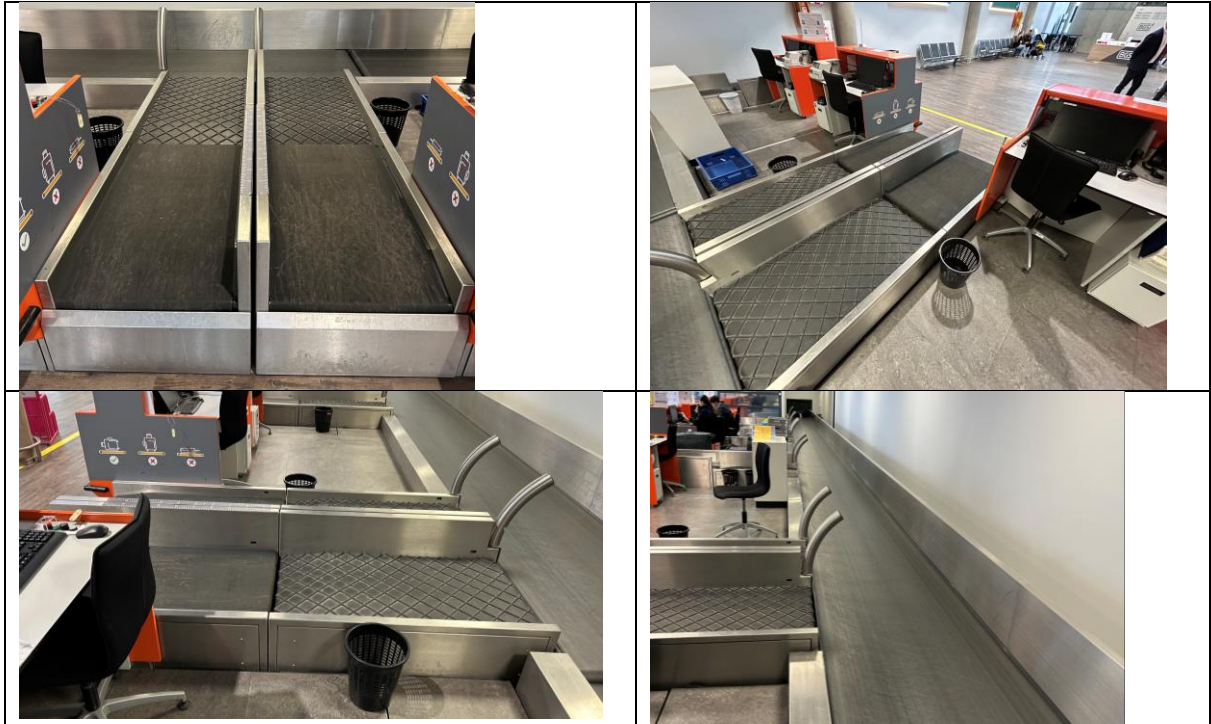
- 9.2.1. The construction of the baggage drop-off terminal must be modular, meaning that it should be possible to install additional equipment in the baggage drop-off terminal, expand the functionality of the SSBD system (e.g., new functions, new integrations with external systems, etc.).
- 9.2.2. The baggage drop-off terminal must be made of strong materials (stainless steel, anodized aluminum, painted steel/aluminum, etc.), and their surfaces must be durable, easy to clean and maintain. The color of the device will be coordinated during the Project analysis phase.
- 9.2.3. The proposed terminals must be new and unused.
- 9.2.4. The width of the baggage drop-off terminal must not exceed 760 mm, the height not more than 1500 mm, and the depth not more than 600 mm.
- 9.2.5. The operating environment temperature for the baggage drop-off terminal is 10-30 °C.
- 9.2.6. The electrical supply voltage for the baggage drop-off terminal is 200-240V, with a maximum power consumption of 1kW.
- 9.2.7. The baggage drop-off terminal must have the following components (including, but not limited to):

- 9.2.7.1. An integrated printer (if used) for printing baggage receipt for the passenger. If the receipt is provided electronically by the Supplier or the airline using its own technological solutions, a printer is not required.
- 9.2.7.2. A color touch screen of no less than 5 inches diagonal.
- 9.2.7.3. A bag tag scanner capable of reading a standard bag tag with a barcode (1D and 2D) when it is correctly attached to the checked-in luggage.
- 9.2.7.4. All additional conveyors and sensors required for loading the baggage onto the BHS collector conveyor belt.
- 9.2.7.5. Other technical equipment required to ensure the functionality of the described SSBD system (cables, power sources, network equipment, automatic switches, etc.).
- 9.2.8. The baggage drop-off terminal screen should not be lower than 1000 mm in height. The specific height of this terminal equipment must be agreed and approved during the Buyer's Project analysis stage.
- 9.2.9. The baggage drop-off terminals and all necessary equipment will have to be installed at the existing check-in desks.
- 9.2.10. Preliminary location of the terminals installation area in KUN – yellow marked area (the exact installation location and method must be agreed upon with the Buyer during the Project analysis stage):



- 9.2.11. Photographic report of the existing passenger check-in areas at KUN (the precise location and method of installation should be agreed upon with the Customer during the Project analysis stage):





## 10. REQUIREMENTS FOR EQUIPMENT INSTALLATION AND COMMISSIONING SERVICES

- 10.1. The Supplier is responsible for all work necessary to fully install and use the SSBD equipment, including but not limited to installation of new equipment, connection, configuration, and startup work.
- 10.2. Before starting the installation work of the equipment at the installation site, the Supplier must prepare and coordinate with the Buyer the documentation for the installation of the SSBD system.
- 10.3. The Buyer ensures the laying and preparation of electrical and network cables for the SSBD equipment to be installed according to Supplier provided information during Project analysis stage. The Supplier must provide consultation and instructions to the Buyer in configuring the network and network equipment (if necessary).
- 10.4. The Buyer ensures that the quality parameters of the network infrastructure are not worse than:
  - 10.4.1. Responsiveness - 10 ms.
  - 10.4.2. Packet loss - 0.01%.
  - 10.4.3. Bandwidth - 100 Mbps for one SSBD device.
- 10.5. The Supplier must comply with all LOU safety and security rules, fire safety rules. The Supplier's representatives must fence off and protect the installation/work areas of the equipment.
- 10.6. Requirements for equipment installation work:
  - 10.6.1. SSBD devices and their necessary components must be installed and connected to the common network.
  - 10.6.2. SSBD terminals must be installed, their devices, necessary finishing work, and other necessary work must be performed.
  - 10.6.3. Necessary repair work must be carried out to remove all installation defects.
  - 10.6.4. The appearance (ergonomics) of the installed SSBD terminals and their mounting structures must be neat. Wherever possible, mounting tools must be hidden.
  - 10.6.5. Supplier must include all SSBD terminals, their devices, parts, and work in the proposal.
- 10.7. Supplier must perform all necessary work for configuring, testing, launching, and ensuring smooth operation of the SSBD equipment.

## 11. REQUIREMENTS FOR TESTING

- 11.1. The Supplier must prepare and agree with the Buyer on all SSBD equipment component testing (SAT, acceptance, and other tests) plans.
- 11.2. Based on the prepared testing plans, the Supplier shall physically participate in the testing, provide consultations on how the tested action/function/operation should be performed according to the provided

testing scenarios, express their comments and suggestions regarding the recommended error criticality level, inform testing participants about error resolution deadlines, and fix errors. All information about the error criticality level, its resolution deadlines, resolution progress, and assigned responsible persons shall be recorded in the error register. The Supplier provides a tool for error registration.

- 11.3. During the Site Acceptance Test (SAT) of the SSBD equipment, it must be confirmed that the newly installed system meets the Buyer's technical specifications and all other customer or user requirements. This test is performed at the equipment installation site after the system has been installed.
- 11.4. The SSBD equipment acceptance testing (SAT) will be performed only after the Supplier has conducted internal testing, provided an internal testing report, and confirmed that the SSBD equipment works as specified in the technical specifications requirements, analysis, and design documentation.
- 11.5. The supplier, based on the information registered in the testing error log and the prepared error elimination plan, must eliminate all registered errors and discrepancies identified during the acceptance testing.
- 11.6. SSBD acceptance tests must include:
  - 11.6.1. Gradual testing of SSBD equipment, printers, conveyors, and other components.
  - 11.6.2. Testing of IT equipment and networks (load/security).
  - 11.6.3. Testing of baggage weighing procedures.
  - 11.6.4. Testing of all scanners (bag tags, boarding passes, etc.).
  - 11.6.5. Testing of all printers.
  - 11.6.6. Testing of all screen.
  - 11.6.7. Testing of software and integration.
  - 11.6.8. Testing of system operation.
  - 11.6.9. Testing under load.
  - 11.6.10. Testing with non-compliant/invalid boarding passes.
  - 11.6.11. Testing with non-compliant baggage units.
  - 11.6.12. Other scope specified by the supplier.
- 11.7. Before starting to use the SSBD equipment, the supplier must eliminate all critical and medium-level errors.
- 11.8. The SSBD system is accepted for use (acceptance certificate is signed) when the supplier demonstrates and ensures that all system operation and quality requirements described in this document have been met.

## **12. REQUIREMENTS FOR USER AND ADMINISTRATOR TRAINING**

- 12.1. The Supplier shall train the Customer's personnel to provide 1st and 2nd level SLA Services, i.e. the Customer's personnel must be able to perform technical maintenance of SSBD equipment and maintain the operation of SSBD equipment, replace easily replaceable SSBD equipment components, identify faults, troubleshoot potential errors.
- 12.2. The Supplier shall train the Customer's personnel to provide preventive maintenance of the SSBD system, as specified by the manufacturer.
- 12.3. After completion of the Installation and testing of technical equipment stage, the following information must be provided during training (but not limited to):
  - 12.3.1. The Supplier must instruct and train the Customer's personnel on the solutions used in the SSBD system.
  - 12.3.2. Brief information on the operation of the SSBD, instructions for using the components.
  - 12.3.3. Instructions on communication and power supply buses.
  - 12.3.4. Instructions for operating.
  - 12.3.5. Technical solution explanations during practical exercises.
  - 12.3.6. Explanation of system components: printers, scanners, conveyors, scales, etc.
  - 12.3.7. Identification, evaluation, and analysis of events and faults.
  - 12.3.8. Report generation, data import/export, interfaces.
  - 12.3.9. Working with SSBD terminals through software interfaces.
  - 12.3.10. Troubleshooting and fault correction (component replacement) in the field of electricity and electronics.
  - 12.3.11. Maintenance intervals.
  - 12.3.12. Technical maintenance policy.
  - 12.3.13. Reading and saving event and operational data.

- 12.4. Technical and preventive maintenance training will be conducted for groups of 2-4 individuals, software training for groups of 2-4 individuals, and user experience training for groups of 2-4 individuals.
- 12.5. Before the start of training stage the Supplier must provide a detailed training plan specifying training topics, schedule, training equipment used, and training methods.
- 12.6. Before the start of training stage the Supplier must prepare user manuals, troubleshooting guides, maintenance procedures and guides, as well as other materials ensuring uninterrupted system operation.
- 12.7. Training will take place in KUN premises.
- 12.8. Practical training must be carried out on installed and functioning SSBD equipment.
- 12.9. The training duration should be sufficient to enable all trained employees to perform their assigned functions independently.
- 12.10. Training should be based on the "train the trainer" principle, with appropriate training materials provided. The supplier must provide certificates for trained employees indicating that they can train other employees. With train the trainer training, employees will have the right to train other employees, and trained employees will gain the right to perform SSBD system maintenance and operation actions.
- 12.11. After training the Buyer's personnel, the supplier must issue certificates attesting to this, which will themselves attest to the fact that the trained personnel's troubleshooting, preventive maintenance, etc. do not negate the supplier's warranty obligations.
- 12.12. The supplier must provide all necessary equipment and tools for training (ladders, tools, keys, spare parts, etc.).
- 12.13. The supplier must organize training in the Lithuanian or English languages.

### **13. REQUIREMENTS FOR DOCUMENTATION**

- 13.1. Final versions of documents must be submitted in MS Word, DWG, PDF or another format approved by the Buyer.
- 13.2. All user and administrator guides are provided in Lithuanian and English. All other technical documentation is provided in Lithuanian or English.
- 13.3. All communication during the Project implementation process must be conducted in either Lithuanian or English language.
- 13.4. The documents should be provided in PDF format and, when required, in the source format of the documents. The source format is the format in which the documents and drawings were created, for example, AutoCAD drawings, Microsoft Word documents, etc.
- 13.5. The supplier must prepare and provide a Detailed Project Implementation Plan within terms provided in **Section 4, Table 2**, which should include:
  - 13.5.1. Project activities and their implementation deadlines.
  - 13.5.2. Persons responsible for the activities.
  - 13.5.3. Roles and responsibilities of subcontractors.
  - 13.5.4. Risk, quality, change and communication management plans.
  - 13.5.5. Datasheets for SSBD equipment, production plan.
  - 13.5.6. Final assembly, installation, commissioning, and testing plan for SSBD equipment.
  - 13.5.7. Plan for installation and testing of necessary integrations.
  - 13.5.8. Other related work essential for successful Project implementation and their interdependencies.
  - 13.5.9. Start and end dates of stages, responsibilities, results, and other relevant information.
  - 13.5.10. The Project schedule should also clearly indicate where the progress of other contractors depends on the Supplier's activities, so that all the Supplier's activities necessary to start the operation of the SSBD system are indicated in the Supplier's Project schedule.
- 13.6. Within the terms specified in *Table 2* of **Section 4** Supplier must prepare and coordinate with the Buyer the technical documentation of the SSBD system implementation. The documentation must include, but not limited to, the following information:
  - 13.6.1. Contents.
  - 13.6.2. Project description.
  - 13.6.3. Functional description.
  - 13.6.4. SSBD system description - architectural and connection schemes.
  - 13.6.5. Description of SSBD system elements, data sheets, images.
  - 13.6.6. Data network diagram and all related information.

- 13.6.7. Schematic view of all system/functions (integrations, data network, etc.).
- 13.6.8. Execution diagrams/drawings, equipment installation location plans.
- 13.6.9. Parts list (printers, scanners, screens, etc.) with manufacturer instructions, parts data sheets.
- 13.7. Within 2 months from the end of the first stage specified in *Table 2* of **Section 4**, the Supplier must provide a Testing Plan that includes internal and other testing cases. They must provide a detailed testing procedure, testing principles and assumptions, tested functions, and testing scenarios.
- 13.8. Before transporting the technical equipment produced for the SSBD to the installation site, the Supplier must provide a test report. The Supplier will allow the equipment to be transported to the installation site only after receiving the report.
- 13.9. Before the start of the training of personnel stage, the Supplier must provide:
  - 13.9.1. Testing reports, in which the results of tests performed according to the testing plan are presented.
  - 13.9.2. A detailed training program specifying training topics, schedule, training equipment and methods.
  - 13.9.3. User and administration guides for the SSBD system in English and Lithuanian. The user guides must include (but not limited to) guides for troubleshooting and fault correction, maintenance procedures and guides, operation guides, as well as other materials that ensure uninterrupted operation of the System. Guides are provided as two separate documents for technical and software equipment.
- 13.10. The Supplier is required to prepare and submit the following documents prior to the signing of the final handover-acceptance protocol:
  - 13.10.1. An adjusted Project implementation documentation based on the actual work done.
  - 13.10.2. All management and administration rights of the installed hardware and software, access data, and all administrator-level passwords.
  - 13.10.3. A description of the architecture of the SSBD system (including the layout project of the SSBD devices).
  - 13.10.4. Specifications and data sheets of the installed equipment.
  - 13.10.5. Description of integrations.
  - 13.10.6. A coordinated with the Buyer technical maintenance regulation for the SSBD system, which includes:
    - 13.10.6.1. The scope of Works/Services performed.
    - 13.10.6.2. A detailed 1st and 2nd level (performed by the Buyer) technical maintenance execution and work procedure description, including a description of responsibilities.
    - 13.10.6.3. A detailed 3rd level (performed by the Supplier) technical maintenance, execution and work procedure description, including a description of responsibilities.
    - 13.10.6.4. Classification of recorded errors and reaction times.
    - 13.10.6.5. A tool for error registration.
  - 13.10.7. A coordinated with the Buyer preventive maintenance regulation for the SSBD system, which includes:
    - 13.10.7.1. A schedule of preventive maintenance work and the scope of Works/Services performed.
    - 13.10.7.2. Description of the detailed preventive maintenance procedures and work order to be carried out by the Buyer, including a description of responsibilities.
    - 13.10.7.3. Description of the detailed preventive maintenance procedures and work order to be carried out by the Supplier, including a description of responsibilities.
    - 13.10.7.4. Recording tools for deviations from nominal values and error registration.
  - 13.10.8. A written commitment to provide consultations on working days within the supplier's working hours on SSBD software usage and system administration issues, as needed.

## **14. REQUIREMENTS FOR TRIAL OPERATION**

- 14.1. The trial exploitation period should last no less than 7 calendar days.
- 14.2. The purpose of the trial period is to verify the operational characteristics of the solution, its functionality under real working conditions, compliance with performance and technical requirements, and to correct any identified errors.
- 14.3. During the trial period the equipment will be operated by the Buyer's employees and/or passengers under the supervision of the Supplier.
- 14.4. During the trial exploitation period, the Supplier must eliminate all the identified functional and operational deficiencies of the agreed SSBD equipment, as recorded in the trial exploitation problem register (including safety deficiencies identified during testing) according to the agreed schedule for error correction. The Supplier will provide a tool for error registration.

- 14.5. If a critical error is detected during the trial operation, the trial operation is considered unsuccessful and is restarted after the Supplier has eliminated the error and informed the Buyer thereof.
- 14.6. Errors identified during the trial operation Supplier must fix within 7 days from the date of the error report. If more time is required to fix the error, the Supplier must provide a detailed error resolution plan, which, upon agreement with the Buyer, may extend the error resolution time for an agreed period.
- 14.7. The Supplier must appoint a consultant responsible for providing functional support for working with the SSBD equipment (in person, by phone, email, etc.) during the trial exploitation period.
- 14.8. The airport's operations should not be disrupted during the trial exploitation of the SSBD equipment.

## **15. REQUIREMENTS FOR TECHNICAL SUPPORT**

- 15.1. The Supplier undertakes to provide technical support services for the SSBD system for no less than 60 months, calculated from the date of signing the equipment transfer-acceptance act.
- 15.2. Payment for provided technical and preventive maintenance services will be made annually.
- 15.3. During the technical support period, the Supplier must provide technical support services and ensure quality assurance in accordance with the agreed SSBD system technical maintenance regulations.
- 15.4. The technical maintenance object is the functionality of the SSBD system, technical equipment, software and system software, standard licensed software configuration, integrations, other technical and software, and system software.
- 15.5. During the technical support period, the Supplier undertakes to ensure all requirements for SSBD equipment in this technical task.
- 15.6. The technical maintenance of the SSBD system includes (but is not limited to):
  - 15.6.1. Elimination of SSBD equipment non-compliance with functional requirements and resolving critical and medium errors.
  - 15.6.2. Consultation by phone and email with SSBD equipment administrators.
  - 15.6.3. Providing new versions of software update, including all work required for the SSBD equipment to function fully with new software (system function transfer, system data transfer, system user instruction updates, system user training).
  - 15.6.4. Supply of spare parts for all equipment purchased in the scope of this purchase and their warehouse management:
    - 15.6.4.1. Spare parts for replacement of damaged or worn out equipment must be supplied to the Supplier's account (including the cost of the parts themselves). The Supplier must ensure timely supply of spare parts, regardless of which System component is damaged. Spare parts must be delivered no later than 14 days from the time the Customer informs that there are no parts in stock.
    - 15.6.4.2. Spare parts must be new and unused.
    - 15.6.4.3. Management of spare parts warehouse (spare parts supply planning, spare parts inventory management in the warehouse, spare parts ordering and supply). The quantity and scope of spare parts in the warehouse is determined and managed by the Supplier based on their experience. The quantity of spare parts should be sufficient to restore the operational properties of SSBD in a timely manner. Spare parts of critical importance should be kept in the Buyer's premises (spare parts that frequently fail and are very important for SSBD operation).
  - 15.6.5. Updating of SSBD technical maintenance manuals (if needed).
- 15.7. Technical support levels:
  - 15.7.1. Level 1 – Quick fix. Errors that can be repaired by trained airport technical personnel or an external company hired by the airport.
  - 15.7.2. Level 2 – Replacement of spare parts required. Errors that can be repaired by trained airport technical personnel or an external company hired by the airport.
  - 15.7.3. Level 3 – Errors that must be repaired by the manufacturer. Errors that would require involvement of the manufacturer's expert, i.e. Software modification or other similar tasks that only the manufacturer's expert has the competence to perform.
- 15.8. All malfunctions and/or failures of SSBD equipment are classified as follows:
  - 15.8.1. Critical malfunction and/or failure – when a malfunction and/or problem is identified that prevents the user of the SSBD equipment from performing the necessary functions.

- 15.8.2. Medium-level malfunction and/or failure – when a malfunction and/or problem is identified that impedes the user of the SSBD equipment from performing necessary functions, but an alternative function execution is known,
- 15.8.3. Low-level malfunction and/or failure – when a malfunction and/or problem is identified that causes difficulties in using SSBD equipment but does not affect the operation of the SSBD equipment and does not have any other impact on the SSBD equipment.
- 15.8.4. The decision on what type of malfunction and/or failure (Critical malfunction, Medium-level malfunction, Low-level malfunction) has been identified is made by the Buyer's appointed responsible persons, in consultation with the Supplier's appointed responsible persons.
- 15.9. Malfunctions and failures must be recorded in the malfunction and failure register. The tool for registering malfunctions and failures is provided by the Supplier.
- 15.10. The deadlines for eliminating malfunctions and/or failures are agreed with the Buyer, but they should not exceed (the deadline starts counting from the moment the malfunction and/or failure is reported to the Supplier):
  - 15.10.1. In the case of critical malfunctions, no later than 2 days.
  - 15.10.2. In other cases - within 3 days or within a mutually agreed upon Malfunction resolution period.
  - 15.10.3. Response time: for critical malfunctions - no more than 1 day, for medium-level and low-level malfunctions - no longer than 2 days.
- 15.11. Information on resolved (fixed) malfunctions and/or failures must be updated and provided to the Buyer in agreed method.
- 15.12. Detailed procedures for technical maintenance and work procedures must be agreed with the Supplier when preparing the SSBD equipment technical maintenance regulations.
- 15.13. Technical maintenance must be performed based on the recommendations of the SSBD equipment manufacturers.

## **16. REQUIREMENTS FOR PREVENTITIVE MAINTENANCE**

- 16.1. The supplier undertakes to provide preventive maintenance services for the SSBD system for a period of not less than 60 months, calculated from the date of signing the equipment handover-acceptance act.
- 16.2. During the preventive maintenance period, the supplier must provide preventive maintenance services for the SSBD equipment in accordance with the agreed SSBD equipment preventive maintenance regulations.
- 16.3. The preventive maintenance object is the functionality of the SSBD equipment implemented under the conditions of this tender, the submitted SSBD equipment, other technical and software, and system software. When performing preventive maintenance, the supplier undertakes to ensure all requirements imposed on the SSBD system in this technical task.
- 16.4. Technical maintenance of the SSBD system must be carried out based on the manufacturer's recommendations, instructions, approved procedures, established frequency according to the preventive maintenance schedule provided in the preventive maintenance regulations and approved by the Buyer, and approved scope.
- 16.5. Planned preventive maintenance work must be carried out with the participation of the responsible employee of the Buyer's operating department.
- 16.6. Malfunctions of the SSBD system identified during preventive maintenance must be promptly corrected. The Supplier must have a reserve/warehouse of spare parts for the equipment, which can be used to quickly restore the system's functionality.
- 16.7. The preventive maintenance of the SSBD system includes (but is not limited to):
  - 16.7.1. Periodic testing of the SSBD equipment, evaluation of its condition, and provision of recommendations.
  - 16.7.2. Inspection of mechanical devices (such as printers, scanners, scales, and other necessary checks, based on the manufacturer's recommendations).
  - 16.7.3. Inspection of control systems.
  - 16.7.4. Determining the need for equipment adjustment and calibration. Adjustment, calibration and certification if necessary according to the requirements of the Lithuanian legislative framework
  - 16.7.5. Other necessary maintenance work to ensure uninterrupted operation of the SSBD equipment, based on the manufacturer's recommendations.
  - 16.7.6. Repair of the SSBD equipment, based on recorded discrepancies.

- 16.8. A detailed report on the condition of the SSBD equipment and the necessary actions to ensure uninterrupted operation of the SSBD equipment must be submitted after each stage of preventive maintenance (within 14 days of the completion of preventive maintenance).
- 16.9. Detailed procedures and work instructions for preventive maintenance of the SSBD equipment shall be coordinated with the Supplier when preparing the SSBD equipment preventive maintenance regulation.

## **17. REQUIREMENTS FOR ADDITIONAL IMPROVEMENT SERVICES**

- 17.1. The Buyer has the right and possibility (but not the obligation) to order additional services according to the Supplier's proposal for an hourly rate from the date of entry into force of the Agreement. The approximate amount of additional services is 200 hours.
- 17.2. The Supplier undertakes to apply a modification performance fee no higher than the fee specified in the proposal. In each separate case, before starting work, the Supplier must present (detail) and agree with the Purchaser the description of the planned additional improvement and/or technical maintenance work, the time costs, providing the basis for time costs, and the implementation deadline.
- 17.3. Additional technical maintenance and support and improvement services for SSBD equipment include the services specified in the table below:

<b>No.</b>	<b>Service type</b>	<b>Description of services</b>
1.	Consultancy services	<p>Consulting services include the following:</p> <ul style="list-style-type: none"> <li>• Consultation on technological capabilities, reliability, accessibility, and development of IT infrastructure related to SSBD equipment.</li> <li>• Specification of additional System functionality, submission of schedule/budget.</li> <li>• Consultation on the integration of the System into other (additional, not specified in the technical specification) systems and/or the integration of other systems into the System.</li> <li>• Other consulting services.</li> </ul>
2.	Programming/configuration services	<p>Programming/configuration services include:</p> <ul style="list-style-type: none"> <li>• Programming of additional (not specified in the technical specification) system functionality.</li> <li>• Expansion and/or improvement of system functionality (if it is not a system error).</li> <li>• Additional system integration and data migration work.</li> </ul>