# LOAN NUMBER 97230 -YF

Loan Agreement

**(Additional Financing for the Serbia Accelerating Innovation and Growth Entrepreneurship Project)**

**between REPUBLIC OF SERBIA**

**and**

# INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

**LOAN AGREEMENT**

AGREEMENT dated as of the Signature Date between REPUBLIC OF SERBIA (“Borrower”) and INTERNATIONAL BANK FOR RECONSTRUCTION AND

DEVELOPMENT (“Bank”), for the purpose of providing additional financing for the Project described in Schedule 1 to this Agreement (“Project”).

The Borrower and the Bank hereby agree as follows:

# ARTICLE I — GENERAL CONDITIONS; DEFINITIONS

* 1. The General Conditions (as defined in the Appendix to this Agreement) apply to and form part of this Agreement.
  2. Unless the context requires otherwise, the capitalized terms used in this Agreement have the meanings ascribed to them in the General Conditions or in the Appendix to this Agreement.

# ARTICLE II — LOAN

* 1. The Bank agrees to lend to the Borrower the amount of twenty-five million Euros, (EUR 25,000,000), as such amount may be converted from time to time through a Currency Conversion (“Loan”), to assist in financing the project described in Schedule 1 to this Agreement (“Project”).
  2. The Borrower may withdraw the proceeds of the Loan in accordance with Section III of Schedule 2 to this Agreement.
  3. The Front-end Fee is one quarter of one percent (0.25%) of the Loan amount.
  4. The Commitment Charge is one quarter of one percent (0.25%) per annum on the Unwithdrawn Loan Balance.
  5. The interest rate is the Reference Rate plus the Variable Spread or such rate as may apply following a Conversion; subject to Section 3.02(e) of the General Conditions.
  6. The Payment Dates are May 15 and November 15 in each year.
  7. The principal amount of the Loan shall be repaid in accordance with Schedule 3 to this Agreement.

# ARTICLE III — PROJECT

* 1. The Borrower declares its commitment to the objectives of the Project. To this end, the Borrower shall: (i) through its Ministry of Science, Technological

Development and Innovation (“NITRA”), carry out Part 1.2, 1.3, and 1.4 and 3 of the Project; (ii) cause the Science Fund to carry out Part 1.1 and 1.5. of the Project; and (iii) cause the Innovation Fund to carry out Part 2.1, 2.2, and 2.3. of the Project; all in accordance with the provisions of Article V of the General Conditions and Schedule 2 to this Agreement.

# ARTICLE IV — EFFECTIVENESS; TERMINATION

* 1. The Additional Conditions of Effectiveness consists of the following:
     1. that the Subsidiary Agreements have been signed in a manner acceptable to the Bank; and
     2. that the Project Operations Manual (“POM”) has been updated and adopted by the Borrower, through NITRA, in a form and substance satisfactory to the Bank.
  2. The Effectiveness Deadline is the date one hundred and eighty days (180) days after the Signature Date.

# ARTICLE V — REPRESENTATIVE; ADDRESSES

* 1. The Borrower’s Representative, who, *inter alia*, may agree to modification of the provisions of this Agreement on behalf of the Borrower through exchange of letters (unless otherwise determined by the Borrower and the Bank), is its Minister of Finance.
  2. For purposes of Section 10.01 of the General Conditions:
     1. the Borrower’s address is:

Ministry of Finance 20 Kneza Milosa St. 11000 Belgrade

Republic of Serbia; and

* + 1. the Borrower’s Electronic Address is: Facsimile: E-mail:

(381-11) 3618-961 [kabinet@mfin.gov.rs](mailto:kabinet@mfin.gov.rs)

* 1. For purposes of Section 10.01 of the General Conditions:
     1. the Bank’s address is:

International Bank for Reconstruction and Development 1818 H Street, N.W.

Washington, D.C. 20433 United States of America; and

* + 1. the Bank’s Electronic Address is: Telex: Facsimile:

248423(MCI) or 1-202-477-6391

64145(MCI)

AGREED and signed in English as of the Signature Date.

# REPUBLIC OF SERBIA

**By**

**Siniša Mali**

**Name: Title: Date:**

**Authorized Representative**

Sinisa Mali

First Deputy Prime Minister and Minister of Finance

14-Nov-2024

# INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

**By**

**Nicola Pontara**

**Authorized Representative**

Nicola Pontara

**Name:**

**Title:**

Country Manager

06-Nov-2024

**Date:**

# SCHEDULE 1

**Project Description**

The objective of the Project is to improve: (i) the relevance and excellence of scientific research, and (ii) innovative entrepreneurship and access to finance for enterprise growth, as a way of contributing to the Borrower’s growth and competitiveness.

The Project consists of the following parts:

**Part 1. Research and Development (R&D) Sector Reforms**

Reforming the Borrower’s R&D sector through:

* 1. (a) The financing of selected competitive programs of the Science Fund, through the provision of basic science grants and applied research grants (“Science Fund Grants”) to Beneficiaries to promote linkages between the private sector and the R&D community and enhance collaboration with EU and other international programs;
     1. the operationalization of the Science Fund, including the strengthening of its corporate governance, organizational structure, monitoring and evaluation and other key institutional elements;
     2. the design of a Science Fund program focused on developing the skills of researchers to access international financing and collaboration opportunities;
     3. the financing of a selected competitive program for AI research projects, through the provision of grants (“AI Research Grants”) to Beneficiaries to carry out Sub-projects based on priority areas including, *inter alia*, e-mobility, green energy transition and clinical healthcare, and based on the Sub-project compliance with Trustworthy AI principles; and
     4. the design of a special funding program for AI research capacity building in the broader scientific community, supporting topics directly and indirectly related to AI technologies, including, *inter alia*, the carrying out of lectures, mentorship, and study visits to leading AI research labs or research institutions.
  2. The design and implementation of institutional transformation plans (“Transformation Plans”) for Selected RDIs.
  3. (a) Capacity building for the AI Institute staff and researchers on AI topics, through the design and implementation of: (i) a mentorship program; (ii) an

internship program; and (iii) the provision of Training for AI institute staff and researchers on planning international research projects and technology transfer and commercialization;

* + 1. Creating strategic partnerships with AI Institutes around the world to collaborate on projects and share best practices, including a researcher exchange program to increase career mobility; and
    2. Capacity building for institutional management and growth, and for managing AI risks in research and project /product development.
  1. BIO4 research management capacity building and funding for Transformation Plans, including:

1. strengthening capacity building for BIO4 LLC staff and researchers, including: (i) technical assistance for BIO4 Campus core facility on facilities management; and (ii) technical assistance for BIO4 LLC.
2. the design and implementation of institutional Transformation Plans for BIO4 participating Selected RDIs, with a specific focus on promoting science-business collaboration and strengthening capacity for technology transfer between BIO4 Campus R&D organizations and the private sector, including for development of new products, services, and technologies in the BIO4 fields.
   1. The establishment of a diaspora facility within the Science Fund to finance technical assistance and provision of grants (Science Fund Grants) to scientists, researchers, and entrepreneurs, to transfer knowledge and skills from the Borrower’s diaspora community back to the Borrower.

**Part 2. Enterprise Acceleration**

Operationalizing the Innovation Fund, including the establishment within the Innovation Fund of:

* 1. A co-investment fund to provide Matching Grants to Selected Companies that raise an equal or greater private equity, for further company development and related technical assistance.
  2. An AI Matching Grant program to provide AI Matching Grants for the financing of investments and technical assistance to Selected Companies to pursue R&D and commercial opportunities based on Trustworthy AI, with the goal of creating new products and services, as well as innovative technologies with significant impact and market potential.
  3. Technical assistance financing for: (a) the competitive selection of companies, by an independent selection committee, to participate in the enterprise acceleration program; (b) the enterprise acceleration program and curriculum development and implementation; (c) development of the AI Matching Grants program and curriculum development and implementation; (d) mentoring to Selected Companies; (e) angel group and network creation and deal flow development; (f) regulatory and legal analysis and development of a policy reforms matrix to enable further development of innovative early and growth stage in the Borrower’s enterprises; (g) enabling policy, legal and regulatory reforms in connection with Trustworthy AI; and (h) participation of the Borrower’s diaspora in innovative entrepreneurship mentoring and angel investments.

**Part 3. Project Implementation, Monitoring, and Capacity Building**

Provision of support for the operation of the PIU and CFU, including, *inter alia*,

(a) strengthening the PIU’s capacity for Project management and implementation, as well as monitoring and mitigating environmental and social risks, including the carry out of minor works and provision of office equipment; (b) strengthening the technical capacity of NITRA, AI Institute, Innovation Fund, Science Fund and Selected RDIs to carry out and supervise AI activities, including supporting the implementation of Trustworthy AI principles throughout the grant lifecycle; (c) hiring experts on Trustworthy AI, as agreed with the Bank, to assist in implementing AI related activities under the Project; (d) carrying out of outreach activities; and (e) carrying out of Project audits.

# SCHEDULE 2

**Project Execution Section I. Implementation Arrangements**

1. **Institutional Arrangements**
   1. Without limitation to the provisions of Article V of the General Conditions and except as the Bank shall otherwise agree, the Borrower shall maintain throughout Project implementation, with composition, resources, terms of reference, and functions acceptable to the Bank:
      1. a Project implementation unit within NITRA (“PIU”), to be responsible for: (i) the overall coordination of all Project implementation activities; (ii) ensuring that the requirements, criteria, policies, procedures, and organizational arrangements set forth in the Project Operations Manual are applied in carrying out the Project; (iii) preparation of all Project implementation documents, including Project Reports; and (iv) monitoring and evaluation of the Project; and
      2. a Central Fiduciary Unit (“CFU”), within MoF, to be responsible for the procurement and financial management of the Project, as detailed in the POM.
   2. Not later than sixty (60) days after the Effective Date, the Borrower, through NITRA, shall hire an AI expert, with terms of reference acceptable to the Bank, to assist in the implementation of AI related activities under the Project.
   3. The Borrower, through NITRA, shall cause the Science Fund and the Innovation Fund to maintain, throughout Project implementation, a governance structure acceptable to the Bank, including, *inter alia*, a managing board, program boards and investment and/or selection committees, as applicable, with composition and rules of operation acceptable to the Bank and in accordance with the provisions set forth in the POM.
   4. For purposes of implementing Parts 1.2 and 1.4.(b) of the Project, the Borrower, through NITRA, shall submit to the Bank for approval any given Transformation Plan, and upon approval by the Bank of said Transformation Plan, the Borrower, through NITRA, shall: (a) enter into an agreement with each Selected RDI (“RDI Agreement”), under terms and conditions acceptable to the Bank, including, *inter alia*, the Selected RDI’s obligation to implement the respective Transformation Plan with due diligence and efficiency, and in conformity with appropriate administrative, technical, financial, economic, environmental and social standards, and practices, and in accordance with the pertinent provisions of this Agreement,

the POM and the ESCP, including the AI Excluded Activities and the BIO4 Excluded Activities; and (b) immediately thereafter, cause each Selected RDI to implement the corresponding Transformation Plan in accordance with its terms and in a manner satisfactory to the Bank.

* 1. The Borrower, through NITRA, shall ensure, and shall cause the SF and IF to ensure, that:

1. any AI activity to be implemented under the Project involving the processing of Personal Data requires a data protection impact assessment and compliance with applicable data protection laws.
2. any High Risk AI Systems activity to be implemented under the Project requires an AI risk impact assessment, as further detailed in the POM, Science Fund and Innovation Fund Grant Manuals, and Grant Agreements; and
3. any AI Research Grant or AI Matching Grant implement Trustworthy AI principles, as further described in the POM and Science Fund and Innovation Fund Grant Manuals and Grant Agreements.
4. **Subsidiary Agreements**
   1. To facilitate the carrying out of Parts 1.1(a) and (d) and 1.5 of the Project, the Borrower, through NITRA, shall make part of the proceeds of the Loan available to the Science Fund on a non-reimbursable basis, under a subsidiary agreement between the Borrower, through NITRA, and the Science Fund, under terms and conditions approved by the Bank (“Science Fund Subsidiary Agreement”), including, *inter alia*, the Science Fund’s obligation to implement Parts 1.1 (a) and

(d) and 1.5 of the Project in accordance with the provisions of this Agreement, the Project Operations Manual, the Science Fund Grant Manual, as applicable, the Anti-Corruption Guidelines and the ESCP.

* 1. To facilitate the carrying out of Part 2 of the Project, the Borrower, through NITRA, shall make part of the proceeds of the Loan available to the Innovation Fund on a non-reimbursable basis, under a subsidiary agreement between the Borrower, through NITRA, and the Innovation Fund, under terms and conditions approved by the Bank (“Innovation Fund Subsidiary Agreement”), including, *inter alia*, the Innovation Fund’s obligation to implement Part 2 of the Project in accordance with the provisions of this Agreement, the Project Operations Manual, the Innovation Fund Grant Manual, as applicable, the Anti-Corruption Guidelines and the ESCP.
  2. The Borrower shall exercise its rights under the Subsidiary Agreements in such manner as to protect the interests of the Borrower and the Bank and to accomplish the purposes of the Loan.
  3. Except as the Bank shall otherwise agree, the Borrower shall not assign, amend, abrogate or waive the Subsidiary Agreements or any of their provisions.

1. **Sub-projects**
   1. The Borrower, through NITRA, shall cause the Science Fund and the Innovation Fund to make Science Fund Grants, AI Research Grants, Matching Grants, and AI Matching Grants to Beneficiaries, up to an amount of EUR 300,000 each, in accordance with eligibility criteria and procedures acceptable to the Bank and as set forth in the POM and in the applicable Science Fund Grant Manual and Innovation Fund Grant Manuals.
   2. The Borrower, through NITRA, shall cause the Science Fund and the Innovation Fund to make each Science Fund Grant, AI Research Grant, Matching Grant, and AI Matching Grant under an agreement with the respective Beneficiary (“Grant Agreement”) on terms and conditions approved by the Bank, which shall include the following:
      1. the Borrower shall cause the Science Fund and the Innovation Fund to obtain rights adequate to protect its interests and those of the Bank, including the right to:
         1. suspend or terminate the right of the Beneficiary to use the proceeds of the Science Fund Grant, AI Research Grant, Matching Grant, or AI Matching Grant or obtain a refund of all or any part of the amount of the Science Fund Grant, the AI Research Grant, Matching Grant, or the AI Matching Grant then withdrawn, upon the Beneficiary’s failure to perform any of its obligations under the respective Grant Agreement; and
         2. require each Beneficiary to:
            1. carry out its Sub-project with due diligence and efficiency and in accordance with sound technical, economic, financial, managerial, environmental and social standards and practices satisfactory to the Bank, including in accordance with the provisions of the Anti-Corruption Guidelines applicable to recipients of loan proceeds other than the Borrower;
            2. provide, promptly as needed, the resources required for the purpose of the Sub-project;
            3. procure the goods, works and services to be financed out of the Science Fund Grant, AI Research Grant, Matching Grant, or AI Matching Grant, as applicable, in accordance with the provisions of this Agreement;
            4. maintain policies and procedures adequate to enable it to monitor and evaluate in accordance with indicators acceptable to the Bank, the progress of the Sub-project and the achievement of its objectives;
            5. (1) maintain a financial management system and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Bank, both in a manner adequate to reflect the operations, resources and expenditures related to the Sub-project; and (2) at the Bank’s or the Borrower’s request, have such financial statements audited by independent auditors acceptable to the Bank, in accordance with consistently applied auditing standards acceptable to the Bank, and promptly furnish the statements as so audited to the Borrower and the Bank;
            6. enable the Borrower and the Bank to inspect the Sub-project, its operation and any relevant records and documents;
            7. comply with the list of AI Excluded Activities and Trustworthy AI principles (assessed via an external audit framework specified in the POM);
            8. with regard to High-Risk AI Systems: (1) provide the SF and IF with results of an independent third-party assessment of compliance of the AI system with the Trustworthy AI principles and requirements by a designated body, acceptable to the Bank;

(2) conduct AI impact assessments in the manner specified in the POM, including before any AI system is deployed in a live environment; and (3) prepare and furnish to the Borrower and the Bank all such information as the Borrower or the Bank shall reasonably request relating to the foregoing.

* 1. The Borrower, through NITRA, shall cause the Science Fund and/or the Innovation Fund, as applicable, to exercise its rights under each Grant Agreement in such

manner as to protect the interests of the Borrower and the Bank and to accomplish the purposes of the Loan.

* 1. Except as the Bank shall otherwise agree, the Borrower, through NITRA, shall cause the Science Fund and the Innovation Fund to not assign, amend, abrogate or waive any Grant Agreement or any of its provisions.

1. **Project Operations Manual and Grants Manuals**
   1. The Borrower, through NITRA, PIU and CFU, shall, and shall cause the Science Fund and the Innovation Fund, as applicable, to carry out the Project in accordance with the provisions of a manual acceptable to the Bank (the “Project Operations Manual” or “POM”). The POM shall contain detailed guidelines and procedures for the implementation of the Project, including, *inter alia*, with respect to: (a) the indicators to be used in the monitoring and evaluation of the Project; (b) the procedures for Project monitoring, supervision and evaluation, including the format and content of the Project Reports; (c) a list of the Science Fund’s and Innovation Fund’s programs eligible for financing under the Project and the list of excluded activities under the Project and the AI Excluded Activities; (d) the Project’s procurement and financial management procedures; (e) Personal Data collection and processing in accordance with applicable national law and good international practice; (f) an AI risk impact assessment framework for High-Risk AI Systems based on Trustworthy AI principles, to be conducted at key milestones throughout the grants lifecycle; (g) an AI risk audit framework whereby High-Risk AI Systems and others as applicable are independently tested and evaluated to ensure compliance with Trustworthy AI principles at key milestones throughout the grants lifecycle; (h) measures to address environmental and social impacts as set out in the ESCP, including mitigation measures to address digital divide, assess, manage and monitor specific risks and impacts of digitalized services under the Project; (i) procedures and measures to identify, minimize and mitigate risks associated with BIO4 related activities and the BIO4 Excluded Activities; and (j) criteria for selection and approval of Selected RDIs and Transformational Plans to be financed under Parts 1.2 and 1.4. (b) of the Project.
   2. (a) No AI Research Grant under Part 1.1 of the Project, shall be financed unless the Borrower, through the Science Fund, has submitted to the Bank, for approval thereof, an updated manual applicable to said Science Fund Grant (the Science Fund Grant Manual), including *inter alia,* the eligibility criteria for the selection of the Beneficiaries and Sub-projects (including how such eligibility criteria incorporate Trustworthy AI principles and ensure AI Excluded Activities are not financed), the selection of expert peer reviewers, composition of selection committee, AI risk assessment and other conditions for grant management, and has received approval from the Bank of said updated Science Fund Grant Manual.

(b) Upon approval by the Bank of each Science Fund Grant Manual, the Borrower shall cause the Science Fund to implement Part 1.1 of the Project in accordance with the provisions of each applicable Science Fund Grant Manual.

* 1. (a) No AI Matching Grant under Part 2.2. of the Project, shall be financed unless the Borrower, through the Innovation Fund, has submitted to the Bank, for approval thereof, an updated manual applicable to said Matching Grant (the Innovation Fund Grant Manual), including, *inter alia*, the eligibility criteria for the selection of the Beneficiaries, Selected Companies and Sub-projects (including how such eligibility criteria incorporate Trustworthy AI principles and ensure AI Excluded Activities are not financed), selection of expert peer reviewers, composition of selection committee, AI risk assessment and other conditions for grant management, and has received approval from the Bank of said updated Innovation Fund Grant Manual.

(b) Upon approval by the Bank of each Innovation Fund Grant Manual, the Borrower shall cause the Innovation Fund to implement Part 2.2 of the Project in accordance with the provisions of each Innovation Fund Grant Manual.

* 1. Except as the Bank may otherwise agree in writing, the Borrower, through NITRA, shall, and shall cause the Science Fund and Innovation Fund, not to abrogate, amend, suspend, waive, or otherwise fail to enforce the Project Operations Manual, each Science Fund Grant Manual, each Innovation Fund Grant Manual or any provision thereof.
  2. In case of any conflict between the terms of the Project Operations Manual, each Science Fund Grant Manual, each Innovation Fund Grant Manual and those of this Agreement, the terms of this Agreement shall prevail.

1. **Environmental and Social Standards**
   1. The Borrower, through NITRA, shall, and shall cause the Science Fund and the Innovation Fund to, ensure that the Project is carried out in accordance with the Environmental and Social Standards, in a manner acceptable to the Bank.
   2. Without limitation upon paragraph 1 above, the Borrower, through NITRA, shall, and shall cause the Science Fund and the Innovation Fund to ensure that the Project is implemented in accordance with the Environmental and Social Commitment Plan (“ESCP”), in a manner acceptable to the Bank. To this end, the Borrower shall, and shall cause the Science Fund and Innovation Fund to, ensure that:
      1. the measures and actions specified in the ESCP are implemented with due diligence and efficiency, and as further specified in the ESCP;
      2. sufficient funds are available to cover the costs of implementing the ESCP;
      3. policies, procedures and qualified staff are maintained to enable it to implement the ESCP, as further specified in the ESCP; and
      4. the ESCP or any provision thereof, is not amended, revised or waived, except as the Bank shall otherwise agree in writing and the Borrower has, thereafter, disclosed the revised ESCP.

In case of any inconsistencies between the ESCP and the provisions of this Agreement, the provisions of this Agreement shall prevail.

* 1. The Borrower, through NITRA, shall, and shall cause the Science Fund and Innovation Fund to:
     1. take all measures necessary on its part to collect, compile, and furnish to the Bank through regular reports, with the frequency specified in the ESCP, and promptly in a separate report or reports, if so requested by the Bank, information on the status of compliance with the ESCP, all such reports in form and substance acceptable to the Bank, setting out, *inter alia*: (i) the status of implementation of the ESCP; (ii) conditions, if any, which interfere or threaten to interfere with the implementation of the ESCP; and (iii) corrective and preventive measures taken or required to be taken to address such conditions; and
     2. promptly notify the Bank of any incident or accident related to or having an impact on the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, in accordance with the ESCP, the instruments referenced therein and the Environmental and Social Standards.
  2. The Borrower, through NITRA, shall, and shall cause the Science Fund and the Innovation Fund to, maintain and publicize the availability of a grievance mechanism, in form and substance satisfactory to the Bank, to hear and determine fairly and in good faith all complaints raised in relation to the Project, and take all measures necessary to implement the determinations made by such mechanism in a manner satisfactory to the Bank.

**Section II. Project Monitoring, Reporting and Evaluation**

1. The Borrower, through NITRA, shall furnish to the Bank each Project Report not later than one month after the end of each calendar semester, covering the calendar semester.
2. Except as may otherwise be explicitly required or permitted under this Agreement or as may be explicitly requested by the Bank, in sharing any information, report or document related to the activities described in Schedule 1 of this Agreement, the Recipient shall ensure that such information, report or document does not include Personal Data.

**Section III. Withdrawal of Loan Proceeds**

1. **General**
   1. Without limitation upon the provisions of Article II of the General Conditions and in accordance with the Disbursement and Financial Information Letter, the Borrower may withdraw the proceeds of the Loan to: (a) finance Eligible Expenditures; and (b) pay the Front-end Fee; in the amount allocated and, if applicable, up to the percentage set forth against each Category of the following table:

|  |  |  |
| --- | --- | --- |
| **Category** | **Amount of the Loan Allocated (expressed**  **in EUR)** | **Percentage of Expenditures to be financed** |
| (1) Goods, works, non-consulting services, consulting services, Training, Operating Costs under Parts 1.1(b), 1.1(c), 1.1(e), 1.3,  1.4, 2.3 and 3 of the Project. | 9,137,500 | 100% (inclusive of Taxes other than value added tax and customs duties for works, goods and non-consulting services) |
| (2) Science Fund Grants under Parts  1.1 (a) and 1.5. of the Project | 0 | 100% of the amounts disbursed  under each Science Fund Grant (inclusive of taxes) |
| (3) Matching Grants under Part 2.1 of the Project | 0 | 100% of the amounts disbursed under each Matching Grant  (inclusive of taxes) |
| (4) AI Research Grants under Parts 1.1(d) of the Project | 8,400,000 | 100% of the amounts disbursed  under each AI Research Grant (inclusive of taxes) |

|  |  |  |
| --- | --- | --- |
| (5) AI Matching Grants under Parts  2.2 of the Project | 7,400,000 | 100% of the amounts disbursed  under each AI Matching Grant (inclusive of taxes) |
| (6) Front-end Fee | 62,500 | Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07  (b) of the General Conditions |
| TOTAL AMOUNT | 25,000,000 |  |

* 1. (a) For the purpose of this table, the custom duties and value added tax for the importation and supply of works, goods and non-consulting services, within the Borrower’s territory and for the purpose of the implementation of the Project, shall not be financed out of Loan proceeds.

(b) The Borrower confirms that the importation and supply of works, goods and non-consulting services, within the Borrower’s territory and for the purpose of the implementation of the Project, shall be exempted from customs duties and value added tax.

1. **Withdrawal Conditions; Withdrawal Period**
   1. Notwithstanding the provisions of Part A above, no withdrawal shall be made:
      1. for payments made prior to the Signature Date;
      2. for Category (4) unless the Bank has received and approved an updated Science Fund Grant Manual; and
      3. for Category (5) unless the Bank has received and approved an updated Innovation Fund Grant Manual.
   2. The Closing Date is September 30, 2027.

# SCHEDULE 3

**Commitment-Linked Amortization Repayment Schedule**

The following table sets forth the Principal Payment Dates of the Loan and the percentage of the total principal amount of the Loan payable on each Principal Payment Date (“Installment Share”).

**Level Principal Repayments**

|  |  |
| --- | --- |
| **Principal Payment Date** | **Installment Share** |
| On each May 15 and November 15 Beginning November 15, 2027  through November 15, 2035 | 5.56% |
| On May 15, 2036 | 5.48% |

# APPENDIX

**Definitions**

1. "AI” means Artificial Intelligence.
2. “AI Excluded Activities” means, collectively:
3. an AI activity that includes (the following list is indicative and not exhaustive):
   1. Any activity directly or indirectly related to weapons or weapons systems;
   2. Facial recognition technologies for mass surveillance, including AI systems that create or expand facial recognition databases through the untargeted scraping of facial images from the internet or CCTV footage, and real-time remote biometric identification systems used in public spaces for law enforcement.
   3. Social scoring systems; and
   4. AI systems that are deliberately designed to deceive or manipulate people, including “deepfakes" and other technologies that can be used to create highly realistic but fabricated content or any other AI systems that manipulate human behavior to circumvent their free will.
4. any AI activity that directly or indirectly violates Trustworthy AI Principles or otherwise results in any diminution of due process under law, that results in bias or discrimination, that deprives an individual of their civil liberties or rights to civic participation, that infringes any freedom of expression or that misuses personal data or that causes any similar harm to any individual or group of individuals.
5. “AI Institute” means the Borrower’s Institute for Artificial Intelligence Research and Development, established in 2021 as part of the Action Plan for the Implementation of the Strategy for the Development of Artificial Intelligence in the Republic of Serbia for 2020–2025.
6. “AI Matching Grants” means any grant to be provided by the Innovation Fund, to a Beneficiary, to finance a Sub-project under Part 2.2 of the Project, as further described in the Innovation Fund Grant Manual.
7. “AI Research Grants” any grant to be provided by the Science Fund to a Beneficiary to finance a research Sub-project under Part 1.1(d) of the Project, as further described in the Science Fund Grant Manual.
8. “Anti-Corruption Guidelines” means, for purposes of paragraph 5 of the Appendix to the General Conditions, the “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016.
9. “Beneficiary” means any individua or group of researchers or entrepreneurs, which have been selected and meet the eligibility criteria to receive a Science Fund Grant, and AI Research Grant, a Matching Grant or an AI Matching Grant under the Project, as set forth in the Project Operations Manual and each Science Fund Grant Manual or Innovation Fund Grant Manual, as the case may be; and “Beneficiaries” means more than one Beneficiary.
10. “BIO 4” means biotechnology, bioinformatics, biomedicine and biodiversity.
11. “BIO 4 Campus” means a physical location and collaboration platform in Belgrade that will bring together researchers, professors and experts from various fields of natural sciences.
12. “BIO4 Excluded Activities” means, collectively:
13. Intentional germline editing: any research that modifies the genes in sperm or egg cells, effectively preventing the creation of genetically altered humans, except for research relating to cancer treatment or known genetic diseases that reduce life expectancy, including but not limited to tumor predisposition syndromes;
14. Cloning a complete human being;
15. Activities intended to create human embryos solely for the purposes of research or stem cell procurement, including the technique of somatic cell nuclear transfer;
16. Cloning mammalian brain cells;
17. Gain-of-function research, which intentionally enhances the transmissibility of known viruses or severity of known diseases;
18. Implanting Animal Embryonic Cells in Humans (creating human-animal chimeras);
19. Research on brain-computer interfaces that could directly control another person’s thoughts or actions;
20. Clinical research that:
21. has the potential to result in significant harm to the participants (or researchers), such as significant physical pain or bodily harm not related to simple routine medical procedures (e.g., taking a blood sample), psychological harm, personal embarrassment or humiliation, or other harm that may adversely affect the participants in a significant way; or
22. includes vulnerable participants (including, but not limited to, prisoners, children, disabled, pregnant women and ethnic minorities) at any phase of the research, including in first in- human or early-stage clinical studies for new therapeutics (including new chemical entities, biologics, gene therapies), medical applications and procedures; or involves ‘challenge trials’, in which participants are intentionally exposed to an infectious disease that may result in severe or chronic illness, or when participants have underlying medical conditions that increase their risks for severe illness; or
23. involves clinical studies concerned with end-of-life or emergency care and related clinical decision-making; or deploys medical devices, particularly implanted devices, that aim to or have the potential to bring about involuntary behaviour change or therapeutic ‘adherence’;
24. Research that involves untested forms of human or animal bio- engineering, human-machine integration, animal-machine integration, human-animal chimeras, or animal interspecies chimerism or synthetic biology;
25. Research that does not have exclusive focus on civil applications or has known applicability for military purposes; and
26. Research that does not adhere to international best practices meant to ensure the humane treatment and use of animals in research, teaching, and testing; and
27. Any research or trial involving human subjects shall first undergo an ethics review according to best international practices prior to approval.
28. “BIO4 LLC” means the Borrower’s State-owned legal entity registered under the name “*BIO4 d.o.o. Beograd*” established pursuant to the Government Decision published in the Official Gazette of Republic of Serbia No. 54/23 and 16/24, and operating in accordance with the Borrower’s Companies Law (“Official Gazette of Republic of Serbia” no. 36/11, *99/11, 83/14, 5/15, 44/18, 95/18, 91/19, 109/21)* and the Law on Innovation Activity (“Official Gazette of Republic of Serbia” no 129/21).
29. “Category” means a category set forth in the table in Section III.A of Schedule 2 to this Agreement.
30. “CFU” means the central fiduciary unit referred to in Section I.A.1(b) of Schedule 2 to this Agreement.
31. “Environmental and Social Commitment Plan” or “ESCP” means the Borrower’s environmental and social commitment plan, acceptable to the Bank, dated November 12, 2019, and updated on July 16, 2024 which sets out a summary of

the material measures and actions to address the potential environmental and social risks and impacts of the Project, including the timing of the actions and measures, institutional, staffing, training, monitoring and reporting arrangements, and any instruments to be prepared thereunder; as the ESCP may be revised from time to time, with prior written agreement of the Bank, and such term includes any annexes or schedules to such plan.

1. “Environmental and Social Standards” means, collectively: (i) “Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts”; (ii) “Environmental and Social Standard 2: Labor and Working Conditions”; (iii) “Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management”; (iv) “Environmental and Social Standard 4: Community Health and Safety”; (v) “Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement”; (vi) “Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources”; (vii) “Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan Historically Underserved Traditional Local Communities”; (viii) “Environmental and Social Standard 8: Cultural Heritage”; (ix) “Environmental and Social Standard 9: Financial Intermediaries”; (x) “Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure”; effective on October 1, 2018, as published by the Bank at: [https://www.worldbank.org/en/projects-operations/environmental-and-social-](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework) [framework.](https://www.worldbank.org/en/projects-operations/environmental-and-social-framework)
2. “General Conditions” means the “International Bank for Reconstruction and Development General Conditions for IBRD Financing, Investment Project Financing”, dated December 14, 2018 (Last revised on July 15, 2023).
3. “Grant Agreement” means the agreement between the Science Fund and/or Innovation Fund with a Beneficiary for the provision of Science Fund Grants, AI Research Grants, Matching Grants, or AI Matching Grants, referred to in Section

1.C.2 of Schedule 2 to the Loan Agreement.

1. “High Risk AI Systems” means AI systems that have the tendency to directly or indirectly violate Trustworthy AI principles throughout the lifecycle of AI systems. This includes, but is not limited to, AI systems in the following areas designated as high-risk under Serbia’s Ethical Guidelines for Development, Implementation and Use of Robust and Accountable Artificial Intelligence:
2. Biometric identification and classification of persons;
3. Management of critical infrastructures and their operation;
4. Education, vocational training and qualification;
5. Employment, human resources and management and access to self- employment;
6. Healthcare;
7. Access to and use of public and social services and basic private services; and
8. Law enforcement.
9. “Innovation Fund” or “IF” means the Borrower’s entity established and operating pursuant to Law on Innovation Activity, published in the Borrower’s Official Gazette No. 129/2021.
10. “Innovation Fund Grant Manual” means the manual referred to in Section I.D.3 of Schedule 2 to this Agreement.
11. “Innovation Fund Subsidiary Agreement” means the agreement referred to in Section I.B.2 of Schedule 2 to this Agreement.
12. “Matching Grant” means any grant to be provided by the Innovation Fund to a Beneficiary to finance a Sub-project under Part 2 of the Project, as further described in the Innovation Fund Grant Manual.
13. “NITRA” means the Borrower’s Ministry of Science, Technological Development and Innovation, or its successor thereto acceptable to the Bank.
14. “MoF” means the Borrower’s Ministry of Finance, or its successor thereto acceptable to the Bank.
15. “Operating Costs” means reasonable incremental expenses incurred on account of implementation of the Project, including, *inter alia*, office supplies and other consumable goods, office rent, internet and communications costs, support for information systems, translation costs, bank charges, utilities, travel, transportation, per diem, accommodation costs (lodging), CFU salaries and other reasonable expenditures directly associated with the implementation of the Project, on the basis of annual budgets acceptable to the Bank, excluding salaries of the civil service employees.
16. “Personal Data” means any information relating to an identified or identifiable individual. An identifiable individual is one who can be identified by reasonable means, directly or indirectly, by reference to an attribute or combination of attributes within the data, or combination of the data with other available information. Attributes that can be used to identify an identifiable individual include, but are not limited to, name, identification number, location data, online

identifier, metadata and factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of an individual.

1. “Project Operations Manual” or “POM” means the manual referred in Section

I.D.1 of Schedule 2 to this Agreement.

1. “PIU” means the Project Implementation Unit referred to in Section I.A.1 (a) of Schedule 2 to this Agreement.
2. “Procurement Regulations” means, for purposes of paragraph 85 of the Appendix to the General Conditions, the “World Bank Procurement Regulations for IPF Borrowers”, dated September 2023.
3. “Project Implementing Entity” means: (i) the Science Fund with respect to Parts

1.1 and 1.5 of the Project; and (ii) the Innovation Fund with respect to Part 2 of the Project.

1. “RDI” means any of the Borrower’s accredited research and development institutes operating under the oversight of NITRA.
2. “RDI Agreement” means the agreements referred to in Section I.A.4 of Schedule 2 to this Agreement.
3. “R&D” means research and development.
4. “Science Fund” or “SF” means the Borrower’s entity established and operating pursuant to the Law on Science Fund of the Republic of Serbia, duly published in the Borrower’s Official Gazette No. 95/2018.
5. “Science Fund Grant” means any grant to be provided by the Science Fund to a Beneficiary to finance a Sub-project under Parts 1.1 (a) and 1.5 of the Project, as further described in the Science Fund Grant Manual.
6. “Science Fund Grant Manual” means any of the manuals adopted by the Science Fund for the Science Fund Grants, satisfactory to the Bank.
7. “Science Fund Subsidiary Agreement” means the agreement referred to in Section I.B.1 of Schedule 2 to this Agreement.
8. “Selected Companies” means any company which meets the eligibility criteria set forth in the Innovation Fund Grant Manual and has been selected to receive a Matching Grant or an AI Matching Grant, and other support under Part 2 of the Project.
9. “Selected RDI” means an RDI which meets the eligibility criteria set forth in the Project Operations Manual and has been selected to benefit from Part 1.2 and 1.4. (b) of the Project.
10. “Signature Date” means the later of the two dates on which the Borrower and the Bank signed this Agreement and such definition applies to all references to “the date of the Loan Agreement” in the General Conditions.
11. “Sub-project” means any of the activities under Parts 1.1(a) and (d), 1.5, 2.1. and

2.2 of the Project.

1. “Subsidiary Agreements” means collectively the Science Fund Subsidiary Agreement and the Innovation Fund Subsidiary Agreement.
2. “Training” means the reasonable costs, as shall have been approved by the Bank, for training and workshops conducted under the Project, including tuition, travel and subsistence costs for training and workshop participants, costs associated with securing the services of trainers and workshop speakers, rental of training and workshop facilities, preparation and reproduction of training and workshop materials, study tours and other costs directly related to training course and workshop preparation and implementation (but excluding goods and consultants’ services).
3. “Transformation Plan” means any of the plans referred to in Part 1.2 and 1.4.(b) of the Project for Selected RDIs to finance, *inter alia*, (i) institutional capacity building, (ii) improving HR processes, (iii) mapping skills needs and gap and developing staffing plans, (iv) technical, project management, leadership, and grant application preparation training, (v) equipment, and (vi) technology transfer costs, as further described in the POM.
4. “Trustworthy AI” means, collectively, the principles and requirements for robust and accountable AI systems, processes and applications throughout the lifecycle of the AI based on Serbia’s Ethical Guidelines for Development, Implementation and Use of Robust and Accountable Artificial Intelligence, which include, at a minimum, the following:
   1. Explainability and verifiability;
   2. Dignity;
   3. Prohibition to cause damage;
   4. Fairness and non-discrimination;
   5. Human agency, oversight, determination and control;
   6. Technical reliability, safety and security;
   7. Privacy, personal data protection and data management;
   8. Transparency;
   9. Diversity, non-discrimination and equality;
   10. Social and environmental wellbeing;
   11. Accountability and responsibility;

Additionally, “Trustworthy AI” principles incorporate the following principles, as included in other good practice frameworks recognized by Serbia including the “UN General Assembly Resolution on Seizing the opportunities of safe, secure and trustworthy artificial intelligence systems for sustainable development” A/78/L.49 (UNGA Resolution) and the “UNESCO Recommendation on the Ethics of Artificial Intelligence” SHS/BIO/PI/2021/1 (UNESCO Recommendation), including, *inter alia*:

* 1. Proportionality and do no harm;
  2. Due process;
  3. Freedom of expression;
  4. Sustainability;
  5. Awareness and literacy; and
  6. Multi-stakeholder and adaptive governance and collaboration.