



**1. Project Data**

Project ID P126229	Project Name YF Innovation Serbia
Country Serbia	Practice Area(Lead) Trade & Competitiveness

L/C/TF Number(s) TF-11257	Closing Date (Original) 30-Nov-2014	Total Project Cost (USD) 12,845,071.20
Bank Approval Date 23-Nov-2011	Closing Date (Actual) 10-Jan-2016	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	9,521,896.88	9,521,896.88
Revised Commitment	7,152,009.65	8,787,765.33
Actual	8,349,004.21	8,349,004.21

Sector(s)  
Tertiary Education(50%):Public Administration - Financial Sector(40%):Public Administration - Industry, Trade and Services(10%)

Theme(s)  
Technology diffusion(100%)

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**2. Project Objectives and Components**

- a. Objectives
- According to the Grant Agreement (page 7) and the Project Appraisal Document (page 4), the project development objective of the Innovation Serbia Project of the Republic of Serbia is: to assist in building the institutional capacity to stimulate innovative activities in the enterprise sector by: supporting the operationalization of the Serbia Innovation Fund (IF); piloting financial instruments for technological development and innovation in enterprises; and, encouraging selected research and development institutions (RDI) to engage in technology transfers and commercialization, and assisting in formulating policy reform for the RDI sector.



- b. Were the project objectives/key associated outcome targets revised during implementation?

No

- c. Components

The project comprised three components:

(1) Capacity Building of the Serbia Innovation Fund (Euro 1.10 million estimate, Euro 1.06 million actual), executed by the Government, aimed to help the IF encourage entrepreneurship by supporting: the operations of the IF's Investment Committee and the due diligence of grant applications; the engagement of strategic and operations advisors to assist the IF's current and future programs, strategy, operations, and procedures; the operational management of the project in relation to the Bank and the European Union; the training of the IF staff; the mentoring and training of beneficiary enterprises; the conduct of events and workshops; and, the establishment of the IF's operational infrastructure, including its information and communication technology and its financial management.

(2) Implementation of Financial Instruments Supporting Enterprise Innovation (Euro 6.00 million estimate, Euro 5.41 million actual), executed by the Government, aimed to support the implementation of financial instruments for enterprise innovation: financing mini-grants (up to Euro 80,000 each for projects to be completed within a year), targeting the proof of concept and prototyping stages of innovation, including intellectual property protection and business plan preparation for initial capital mobilization; and, financing matching grants (up to Euro 300,000 each for projects to be completed in two years) targeting research and development (R&D) in technology development projects for new or improved technologies, products and processes. Incorporated entrepreneurs, innovative start-ups, spin-offs, and micro and small enterprises, with majority Serbian private sector ownership, were eligible for mini and matching grants, applications for which were evaluated by the IF's Investment Committee.

(3) Provision of Technical Assistance to Research and Development Institutes (Euro 0.70 million estimate, Euro 0.80 million actual), executed by the Bank, aimed to provide: customized technical assistance (TA) for up to two research development institutions (RDIs) based on a detailed needs assessment; limited TA for up to four RDIs based on a general needs assessment; and, technical input to the Government's future RDI sector reform program, based on lessons learned from the customized and limited TA activities.

- d. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The project cost, including expected Bank administrative fees of Euro 0.59 million, was estimated at appraisal at Euro 8.4 million (US\$11.9 million equivalent, at the exchange rate of Euro 0.71 to the U.S. dollar). The actual project cost at closing (actual Bank administrative fees were Euro 0.59 million, as estimated) was Euro 7.86 million (US\$9.7 million equivalent, at the exchange rate of Euro 0.81 per U.S. dollar). Both estimated and actual project costs exclude those for items covered by Government financial contributions to the project.

Financing: The European Commission for the European Union Instrument for Pre-Accession Assistance Trust Fund, with the Bank as administrator, financed the project with a grant of Euro 8.40 million. Only Euro 7.86 million of the grant was disbursed. The balance of Euro 0.655 million was cancelled (differences are due to changes in the Euro to U.S. dollar exchange rate between the project appraisal and project closing dates).

Borrower Contribution: The Republic of Serbia provided counterpart funding to the project of Euro 3.86 million, some 75 percent higher than the Euro 2.22 million estimated at appraisal, the increase due largely to the extension of the project closing date by 13 months.

Dates: The project was approved in November 23, 2011 and became effective in December 8, 2011. A restructuring of the project in September 5, 2014 moved the project closing date from November 30, 2014 to January 10, 2016 to allow the completion of activities including the contracting of new awardees from the fourth call for proposals and the disbursement of funds earlier approved for previous awardees.

### 3. Relevance of Objectives & Design



a. Relevance of Objectives

The project was relevant to economic conditions in Serbia at project preparation and continues to be relevant at project closing. Strengthening the competitiveness of the economy by incentivizing firm-based innovation and by directing public research and development institutions (RDIs) to support enterprise innovation through technology transfer and commercialization remains vital to Serbia's drive to stimulate economic growth. The Serbia Innovation Fund (IF) was envisioned to be the national agency responsible for promoting innovation by enterprises and technology transfer and diffusion by research and development institutions (RDIs). The project, while ably demonstrating the possibilities of generating technology-based start-ups and spin-offs, was a pilot effort. To achieve greater impact, the effort would need to be scaled up. In which case, the interventions pioneered by the project ---technology transfer, commercialization, diffusion, absorption, adaptation and application --- remain relevant to future efforts to nurture and grow the innovation ecosystem in Serbia (similar to the traditional concept of ecosystem in nature, "innovation ecosystem" as used in this project means the economic environment in which innovation is nurtured or discouraged).

The project continues to be well aligned, at project closing, with the strategic objectives of the World Bank Group's Country Partnership Framework (CPF) for Serbia for FY2016-20. Fully oriented toward the twin goals of reducing poverty and boosting shared prosperity for the bottom forty percent of the population, the CPF aims to support Serbia to create a competitive and inclusive economy. The objective of the project --- building the institutional capacity to stimulate innovative activities in the enterprise sector --- is well aligned to the second of two broad focus areas emphasized by the CPF --- private sector growth and economic inclusion. More explicitly, the CPF recommends an economic strategy that is export-oriented, focused on creating employment, and is equitable. The CPF (page 8) posits that the IF, which has demonstrated the possibilities of generating start-up businesses that can compete internationally, can serve a vital role in an export-driven growth model. In particular, the IF could explore sectors including agribusiness, the automotive industry, the chemical industry, and services that have strong export potential.

The project is also relevant to Serbia's drive to gain membership in the European Union (EU). Serbia, which applied for membership in 2009 and was granted official candidate status in 2012, opened negotiations on accession in 2014 and earned a commitment to receive developmental aid through 2020 from the Instrument for Pre-Accession Assistance, the funding mechanism for candidate countries. This project will improve Serbia's absorptive capacity for future innovation-related funds from the EU. The project's focus on RDI sector reform will also help Serbia fulfill its commitment to cooperate with the EU on research, a commitment included in the Stabilization and Association Agreement that Serbia signed with the EU in 2008. Ultimately, a more innovative and competitive economy, a broad goal with which the project is aligned, will strengthen Serbia's case for membership in the EU.

Rating  
High

b. Relevance of Design

The project's components and activities were consistent with the project objective. Operationalizing the Serbia Innovation Fund (IF), developing the technical capacity of the IF to promote and manage innovation programs, providing technical assistance to research development institutes (RDIs) on technology transfer, reforming the RDI sector and directing it toward technology commercialization, creating financing instruments that support innovation, and extending mini- and matching-grants for new technology products and processes --- were all well aligned with the development objective of building the institutional infrastructure and capacity in Serbia to stimulate innovative activities in the enterprise sector.

The causal chain in the project Results Framework was convincing. An IF that was more capable of designing, piloting, and managing innovation programs would help build a strong pipeline of innovative projects and firms in the economy, leverage seed financing for start-ups with private commercial resources, and guide Government on enterprise innovation policy. Applied research rather than basic research RDIs would be better able to work on technology transfer and technology commercialization ventures, including in partnership with private enterprises. And a more robust financing system for technology projects would be vital to the development of new and improved products and processes. All three institutional outcomes lay the foundation of a more dynamic and vigorous innovation ecosystem in the economy.

The pilot nature of the project was appropriate. Few mechanisms to incentivize private sector innovation and commercial research and development had previously been implemented in Serbia, and it was necessary that the project ideas be tested in a pilot setting. The financing instrument --- a technical assistance grant --- was also suitable: part of the proceeds were extended as mini- and matching-grants to enterprises. That the grant funds were from the EU Instrument for Pre-Accession Assistance Trust Fund was also suitable: Serbia was and is



negotiating an accession to the EU.

The ICR (page 2) lists three other projects that were approved and implemented before, or concurrent with, this operation. The project to improve science infrastructure, funded by the European Investment Bank in the amount of Euro 200.0 million, aimed to upgrade infrastructure at universities and RDIs and establish science parks for biotechnology, nanotechnology and advanced computing. The Program to Strengthen Innovation in Small and Medium Enterprises (SMEs) extended Euro 380,000 in matching grants to support innovation by SMEs. And, the Integrated Innovation Support Program, funded as well by the European Union Instrument for Pre-Accession Assistance in the amount of Euro 3.0 million, also aimed to support innovation by SMEs. There is some overlap between this project and these initiatives in so far as building the institutional capacity to stimulate enterprise innovation is concerned. In which case, the achievement of the PDO may not be exclusively and entirely attributed to this project.

Rating  
Substantial

## 4. Achievement of Objectives (Efficacy)

### Objective 1

#### Objective

To assist in building the institutional capacity to stimulate innovative activities in the enterprise sector by: supporting the operationalization of the Serbia Innovation Fund (IF); piloting financial instruments for technological development and innovation in enterprises; and, encouraging selected research and development institutions (RDI) to engage in technology transfers and commercialization, and assisting in formulating policy reform for the RDI sector.

#### Rationale

#### Outputs

The capacity building component of the project met or exceeded all its output targets.

- A mechanism to support the training and mentoring of innovative start-ups was established, meeting the target (the mechanism did not exist prior to the project, in 2011).
- Fifty-one start-ups were mentored, far exceeding the target of 10 start-ups (the baseline value was zero). The mentoring was provided by international advisors on key topics including: business formation and expansion; intellectual property protection and commercialization; and, early stage technology and business development.
- Ten managers were trained, who started applying their newly learnt skills in the IF. This exceeded the target to train four managers (the baseline value was zero). The international training in Israel, Finland and Croatia focused on ecosystem development, early stage entrepreneurship, innovation program design, and sequencing and evaluation.

The financial instruments component exceeded all its output targets.

- Four financial instruments were designed and introduced, exceeding the target of three (the baseline value was zero). The governance system for funding innovation projects included having: sixty independent international peer reviewers; a five-member independent investment committee, which included private sector industry representatives; codified mini and matching grant manuals; a transparent merit-based selection process; and, an under-90 day selection timeline.
- Fifty-two projects were funded, exceeding the target of 20 projects (the baseline value was zero). Forty-one were awarded mini grants, and eleven, matching grants. The projects, selected in over four rounds of calls for proposals, had high potential for commercialization. The projects



provided over 300 high-value jobs.

- Forty-eight enterprises were funded, exceeding the target of 15 enterprises (the baseline value was zero). By the project closing date, Euro 5.4 million was disbursed to the awardees.

The technical assistance component also exceeded all its output targets.

- Ten research and development institutions (RDIs) were identified for technology transfer and commercialization support, exceeding the target of four (the baseline value was zero). The Bank delivered high-level training workshops on topics including: program and project management; intellectual property management; R&D marketing and sales; performance evaluation and career development; and, the development of R&D capabilities.
- Four RDIs were assessed jointly by international experts and by RDI management: the Institute of Physics, at Belgrade (IPB); the Institute of Molecular Genetics and Genetic Engineering (IMGGE); the Institute of Food Technology, at Novi Sad (FINS); and, the Institute of Medicinal Plants Research (IMPR). The target was two RDIs (the baseline value was zero). The assessments provided detailed recommendations and specific action plans for: improved institutional capacity; performance management; and, knowledge transfer and research commercialization practices.
- Twenty-two networking and educational events were organized for the enterprise, academic and research communities, exceeding the target of eight (the baseline value was zero). The events included: project launches in six cities; launches of the mini and matching grant programs; an intellectual property and technology transfer workshop; a Western Balkans Enterprise Development and Innovation Facility (WB EDIF) workshop; enterprise training sessions for awardees; a Finland-Israel knowledge economy workshop; consultations with four major technology transfer offices on the design of a technology transfer facility; and, industry-RDI consultations on the design of a collaborative grant scheme.

## Outcomes

The degree of achievement of the objective is assessed as High. The project supported the operationalization of the Serbia Innovation Fund (IF), established earlier in 2005, as the institution responsible for: designing, piloting and managing innovation programs in the country; supporting proof-of-concept and prototyping activities; building a pipeline of entrepreneurs and innovation firms eligible for financing; participating in the co-financing of innovation programs; and, leveraging other activities organized by international bodies, financial institutions and the private sector to further the innovation agenda of the Government. Having developed its own institutional capacity and operational processes, the IF was able to provide guidance to the private sector and to the Government on enterprise innovation policies and programs.

- Thirty-eight operational technology start-ups were funded, exceeding the target of ten (the baseline value was zero). Thirty six of the 38 start-ups funded with mini grants and another 10 funded with matching grants remained active at the ICR date, reflecting a 95 percent enterprise survival rate. Several achieved early success, receiving coverage in the international press.
- Nineteen new products and processes were launched by the beneficiary enterprises, exceeding the target of eight (the baseline value was zero). The beneficiary enterprises reported other noteworthy achievements, not explicitly targeted by the project at appraisal: 19 firms reported generating revenue resulting from the grants; nine entered into international cooperation agreements with other firms; two secured market distributions in the United States; 18 formed new business collaborations; 13 filed applications for patent protection under the Patent Cooperation Treaty, four with the European Patent Office, five in the United States, Japan and Australia, and 33 in Serbia; 10 applied for trademarks; and six applied for copyrights.
- Three technologies were transferred by RDIs, meeting the target (the baseline value was zero).
- The amount of financing mobilized by IF, in addition to that provided by the project, was Euro 34.9 million --- Euro 28.0 million from the Western Balkans Enterprise Development and Innovation Facility (WB EDIF) and Euro 6.9 million from the Serbia Research, Innovation and Technology Transfer Project (SRITTP). The target was to mobilize Euro 20.0 million in additional financing (the baseline value was zero)
- Policy recommendations for RDI sector reform were disseminated to stakeholders, meeting the target (reform policies or strategies did not exist in the baseline). The Bank delivered a Policy Note on RDI Sector Reform to the Ministry of Education, Science and Technological Development (MOESTD) in October 2013, which the MOESTD used to initiate systematic reforms in the research and development (R&D) sector. The Government is establishing key performance indicators for RDIs and individual researchers, which are market aligned. The effort is supported by a Competitiveness and Jobs Project funded by the Bank.



Rating  
High

## 5. Efficiency

An economic analysis of the project was not conducted at appraisal or at closing.

The ICR (page 17) explains that an economic rate of return (ERR) for the project was not formally calculated for several reasons: the project was a pilot, testing multiple missing elements in the country's innovation system; it was geared to trigger systemic changes; a significant scaling-up of the financing would have been required to demonstrate impact; the full effect of the outcomes would only be observed several years after the pilot. Moreover, the specific sub-projects to be funded by the IF were not known at appraisal.

The ICR (page 17) cites the findings of an independent economic evaluation of the mini and matching grant programs (conducted by a consulting firm in October 2015) to illustrate the economic benefits derived from these programs: (a) a credible and transparent platform for promoting innovation, made accessible to many businesses; (b) grant programs that were accessible and effective, with decision processes that were transparent and trustworthy; (c) expanded opportunities for technology entrepreneurs, which created innovative start-ups and spin-offs; and, (d) greater sales (by Euro 27,000 on average) and greater employment (by five employees on average) by firms receiving mini grants, compared to firms rejected for mini grants.

Evidence submitted at the review of the ICR indicates that the Serbia Innovation Fund (IF) operated relatively efficiently during the life of the project, compared to a global benchmark agency, the Innovation Authority in Israel. The operational budget per operational staff of the IF over the period 2012-14, Euro 130,588, was less than half that of the benchmark, Euro 286,379, in 2017. The approved budget per grant application, Euro 13,255, was less than a tenth that of the benchmark, Euro 143,142. And, the ratio of the operational budget per application to the approved budget per approved grant project, at 4 percent, was half that of the benchmark, at 8 percent.

The extension of the project by a year may suggest some degree of operational inefficiency. Slower than expected disbursements, coupled with a high staff turnover rate at the IF (which would have negated the purpose of capacity building activities), prompted the Bank to agree to a one-year extension of the project. The extension would allow the contracting of new awardees from the fourth call for proposals (CFPs) as well as the full disbursement of funds earlier approved for previous awardees. However, two material circumstances attenuate the inefficiency. First, the Government insisted on staging two mini grant and two matching grants CFPs in 2012, a heavy workload on the newly organized IF. And, two, Serbia faced a turbulent year in 2014 --- a catastrophic flood, several changes in Government, and, delayed budgetary funding, including for the IF.

In view of the economic benefits derived from the pilot, the comparative cost efficiency of the IF's operations, and the attenuating circumstances to the delay in the project completion date, the efficiency of the project is rated Substantial overall.

Efficiency Rating  
Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable



\* Refers to percent of total project cost for which ERR/FRR was calculated.

## 6. Outcome

The outcome for the project is rated as Satisfactory.

The relevance of objectives is rated High.

The relevance of design is rated Substantial.

The efficacy of the project is assessed as High.

The efficiency of the project is assessed as Substantial.

- a. Outcome Rating  
Satisfactory

## 7. Rationale for Risk to Development Outcome Rating

Overall, the risk to the sustainability of the development outcome is Negligible.

There was a change of government during project implementation. The risk at that time was that the program would be derailed. The risk did not materialize, however. Consequently, political risks to the sustainability of the development outcome, including that arising from changes in government, are rated negligible.

All of the activities of this pilot project were completed. The achievements of the pilot effort appear sustainable under follow-on projects. The sustainability of the development outcome was, in fact, enhanced with the commitment by the Government and by the Bank to support the project development objective through two new projects --- the Serbia Research, Innovation and Technology Transfer Project (SRITTP) and the Competitiveness and Jobs Project (C&JP). The SRITTP, approved in 2015 with funding from the European Union Instrument for Pre-Accession Assistance Trust Fund, supports national technology transfer activities and collaborative research endeavors between academia and industry. The C&JP, also approved in 2015, supports: the continuation of the mini and matching grant programs; the scaling of technology transfer activities; and, the implementation of RDI sector reforms using a results-based approach. Moreover, the IF's operational budget was included in the Government's annual budget.

The IF could readily replicate the results of this operation --- the project received 469 project proposals from 326 enterprises and funded 52 projects of 48 enterprises over the four-year pilot --- under the successor projects. Institutional capacity has been built in the IF and in the RDIs to advance the innovation ecosystem, and the successor operations will further strengthen the gains. However, as the independent evaluation study claims, 52 innovation projects in four years are too few to have an economy-wide impact. Rather, the IF would need to fund and support some 200-300 projects annually to make an economy-wide impact. Scaling up the pilot to this size, however, entails risks --- macroeconomic risks, political economy risks, and operational risks --- that have yet to be identified, and subsequently mitigated and managed going forward.

- a. Risk to Development Outcome Rating  
Negligible

## 8. Assessment of Bank Performance





**a. Quality-at-Entry**

The Bank recast the innovation policy discourse in Serbia to focus on the role of entrepreneurship and of government in building the national innovation system. There had been few mechanisms in the post-transition economy to incentivize private sector-centered innovation and technology development and private sector-led research and development. Public research and development institutions (RDIs) focused on basic rather than applied research, had few incentives to innovate, did not receive regular institutional budget allocations, and had a thin record with technology transfer and diffusion.

The Bank leveraged top-notch global expertise for the project. The IF was to be guided by an international advisory team on topics including strategy and operations.

The Bank drew heavily from lessons learned from many post-transition economy private sector development programs. The Bank had previously worked on supporting private sector development in post transition economies, including in neighboring Croatia. Learning from the experience, the Bank focused on filling the gaps and developing the mechanisms to develop enterprise-led innovation and technology development.

For an institutional capacity building project, the Bank emphasized the importance of extending technical assistance to the IF and to the RDIs, of piloting the grant programs and the financing instruments designed to support innovation by private enterprises, and of using strong M&E principles and practices to track the record of technology transfer and diffusion targeted by the project.

Quality-at-Entry Rating  
Satisfactory

**b. Quality of supervision**

The Bank supervised the project intensely and meticulously considering its pilot status of the project and in view of the first time relationship the Bank had with the Delegation to the European Union as a donor to Serbia. The Bank fielded a capable supervision team with a strong thematic and operational skills mix, aided by competent support from staff in the local office. Supervision missions were carried out at least twice a year, and up to five times a year during the early stages of the project.

The Bank was proactive and responsive to the needs of the Government during project implementation. It demonstrated flexibility in the use of project resources. It was considerate of Government requests for change. It led the restructuring of the project, in close consultation with the donor and the Government.

The compliance of the project with environmental and social safeguards and with fiduciary requirements in procurement and financial management was due in large measure to significant capacity building activities undertaken by the Bank.

In implementing the technical assistance component of the project (the third project component in which it acted as the executing agency), the Bank successfully mobilized leading global practitioners in various technical fields, earning the respect and trust of the local research community.

Overall, the Bank played a vital role in helping build IF's institutional capacity, by offering guidance to the institution and by sharing its own expertise in various fields.

Quality of Supervision Rating  
Highly Satisfactory

Overall Bank Performance Rating  
Satisfactory

## 9. Assessment of Borrower Performance





a. Government Performance

The Government worked closely with the Bank during project preparation.

The Government was strongly committed to the project. The Government demonstrated its commitment by: requesting the Delegation of the European Union to earmark European Union Instrument for Pre-Accession (IPA) funding for enterprise innovation; approving a notional operational budget for the IF from 2011 to 2015; and, attracting a senior person in the Serbian "diaspora" to lead the IF. The Government readily complied with all of the project covenants stipulated in the Grant Agreement.

The Government appears to have rushed the implementation of the grants program at a time when the IF was newly organized, when it insisted that two mini grant calls for proposals and two matching grant calls for proposals be launched in 2012. The IF did not as yet have the capacity to handle the proposed workload. The Government eventually agreed to treat the first call for proposals for the matching grant program as a pilot, the lessons of which would inform future rounds.

The Government could have been more proactive in supporting the IF with an adequate operating budget in early 2014. Serbia faced a turbulent year in 2014: the country faced a catastrophic flooding; there were multiple changes in the Government; and, budgetary operations were delayed. Shortfalls in budgetary support for the IF's operations slowed down the implementation of the project. The uncertainty also triggered staff departures from the IF. The IF's budget was only fully funded at mid-year, after which the IF started to recover from the early financial and organizational shock.

Government Performance Rating  
Moderately Satisfactory

b. Implementing Agency Performance

The IF acted as implementing agency of the project.

The IF was staffed with qualified experts, who were selected through a competitive process and who acted professionally in the face of organizational difficulties. The IF confronted financial and institutional challenges early on. It did not start with a permanent managing director. It lacked timely budgetary support in early 2014. It faced a management restructuring, also in 2014. However, the IF staff that remained with the organization responded to the challenges competently and discharged their duties professionally.

The IF eventually established itself as an independent and efficient institution, with strong and transparent governance practices. The IF selected beneficiaries of the grant and mentoring programs according to objective criteria consistently applied. The beneficiaries were monitored closely, which helped ensure that their projects were implemented successfully. The IF skillfully designed the mentoring program to accommodate the customized training needs of the beneficiary entrepreneurs, as well as of the IF staff. It launched the mini and matching grants program carefully, taking on the early lessons learned from pilot first call for proposals for matching grants, and raising the private sector contribution to the matching grants from 25 to 30 percent. The IF achieved consensus with stakeholders on the design of the royalty scheme. It engaged commercialization brokers to work with RDIs to identify successful commercialization projects.

The IF cultivated a strong relationship with its advisory team and was responsive to oversight from the Bank. It collaborated constructively with the Delegation of the European Union and the Ministry of Education, Science, and Technological Development. These relationships helped the IF overcome political and institutional challenges over the course of the project and allowed it to focus on creating a positive environment for innovation and technology transfer programs in Serbia.

Overall, the IF implemented the project very effectively.

Implementing Agency Performance Rating  
Highly Satisfactory

Overall Borrower Performance Rating



Satisfactory

## 10. M&E Design, Implementation, & Utilization

### a. M&E Design

The project had a coherent M&E design. The output and outcome indicators in the Results Framework were measurable and were adequate to track the progress and to provide evidence of the results of the project.

Beyond tracking the output and outcome indicators, an important focus of the M&E plan for the operation was to help the IF build a strong capacity in M&E for its future activities. Particularly useful would be the ability of its internal systems to capture and analyze firm-level innovation data, for purposes of supporting evidence-based policy-making by the Government.

### b. M&E Implementation

A consulting firm developed the procedures for conducting the M&E activities of the project. The consultant also provided training to the M&E staff. The M&E function was carried out by an IF staff of two --- a Program Manager and a Senior Associate who were responsible for collecting data, overseeing deliverables and tracking payment schedules. Because the M&E also focused on analyzing the performance of projects financed by the mini and matching grants programs, the consultant assisted the IF to gather data on applicants to, and beneficiaries of, the grant programs and on their projects.

The IF prepared semi-annual M&E reports on the project. The reports were widely shared with the Government, the Bank and the Delegation to the European Union.

A think tank with a track record in innovation program impact evaluations was engaged from May 2013 to November 2015 to design an evaluation approach suitable to the small number of beneficiaries. The consultant was tasked ensure the quality of the evaluation methodology and the integrity of the evaluation itself.

### c. M&E Utilization

Data gathered from the M&E implementation was used not only to improve project performance but also to advance the development objective of the project, including beyond the scope of the current operation.

The M&E helped the IF and the Bank to identify issues and risks faced by the project and to formulate time-bound action plans to mitigate them.

A presentation by the IF and the consultant in August 2015, focusing on the beneficiary selection process, demonstrated the additionality of the IF programs to the project's stakeholders. The presentation was made to the Delegation to the European Union, the Ministry of Finance, the Ministry of Education, Science and Technological Development, the Ministry of Economy and Rural Development, and the Intellectual Property Office.

The evaluation of the mini and matching grants programs influenced the Delegation to the European Union to commit additional funding for these grant schemes under its future programs. The positive results of the evaluation also led to the inclusion of mini and matching grants programs in the Bank funded Competitiveness and Jobs Project in 2015.

The M&E of the Bank-executed technical assistance component of the project was useful in focusing the attention of RDI management and researchers on knowledge transfer and commercialization activities. Importantly, it enabled the Bank to estimate gaps in the financing of knowledge transfer and research commercialization in the country. It also assisted the Government to advocate for a sequel to the project with the Delegation to the European Union. The delegation subsequently supported the establishment of the Technology Transfer Facility and the launch of the Collaborative Grant Scheme with funding from the Serbia Research, Innovation and Technology Transfer Project (SRITTP).



The M&E work of the IF was heavily supported by consultants. While the results are commendable, it is not clear whether, following the end of the project, the IF can without greater capacity effectively monitor its work and manage independent evaluations.

M&E Quality Rating  
Substantial

## 11. Other Issues

### a. Safeguards

Environmental Safeguards: The project was classified as an Environmental Category B at appraisal. The project did not entail any major environmental risk. The innovation processes supported by the project did not involve any environmentally destructive technologies and practices. The Environmental Management Framework was implemented successfully and there were no issues related to compliance with environmental safeguards.

Social Safeguards: The project did not entail any social risk, or risk of adverse social impact.

### b. Fiduciary Compliance

Procurement: The IF and the enterprise beneficiaries followed Bank procurement guidelines. Procurement under grants provided by the IF followed simplified Bank-approved commercial practices. No major procurement issues were encountered.

The rating for procurement was Satisfactory.

Financial Management: Quarterly unaudited financial reports were submitted to the Bank on time. Audits reports were "unqualified", and the auditors did not identify any major system and control issues. All audit reports were found satisfactory to the Bank.

The rating for financial management was Satisfactory.

### c. Unintended impacts (Positive or Negative)

The project did not have any unintended impacts.

### d. Other

No other issues were raised by the ICR.

## 12. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	---



Risk to Development Outcome	Negligible	Negligible	---
Bank Performance	Satisfactory	Satisfactory	---
Borrower Performance	Satisfactory	Satisfactory	---
Quality of ICR		Substantial	---

**Note**

When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.

The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

### 13. Lessons

The four lessons are drawn from the ICR (pages 37-38), with some adaptation.

One, a capable national innovation agency is integral to a national innovation system. The IF developed into a well-functioning institution responsible for stimulating innovative activities in the enterprise sector in the Serbia. It was staffed by qualified and committed professionals, who are competent and fairly compensated. It was highly regarded by entrepreneurs who are beneficiaries of its programs, as well as by its peer institutions in other countries. It will serve Serbia well if it continues to nurture the IF. Additional rounds of capacity building and staff renewal to meet new client needs will strengthen the institution's capacity to respond to changing local and global innovation challenges.

Two, governance mechanisms are vital to the effective and efficient delivery of support for innovation activities. The IF operated a transparent beneficiary enterprise selection process. It placed a premium on the merit and commercialization potential of candidate projects. Its decisions were made by an independent Investment Committee. It was responsive to guidance from a professional global advisory team. Consequently, the IF emerged as a credible institution. It developed the ability to mentor enterprises. And, it built up the capacity to absorb and distribute European Union funds for innovation projects.

Three, the horizontality of innovation policy matters in nascent innovation ecosystems. A horizontal innovation policy involves placing the broader strategic approach above departmental goals, by integrating objectives and priorities across various policy sectors (OECD, "Governance of Innovations Systems", 2005). In the post-transition economy of Serbia, dominated by entrenched state enterprises and government research development institutions, it was widely expected that the innovation proposals would be limited to information and communication (ICT) technology and to digital technology projects in the Novi Sad and Belgrade areas. By adhering, however, to a horizontal policy that emphasized merit and commercialization potential, the IF discovered a robust pipeline of projects across diverse economic sectors and geographic locations.

Four, visibility helps an innovation program gain momentum. In this regard, the Bank can pick up lessons from the European Union by advertising project activities more prominently, sharing lessons learned more widely, and celebrating successes more openly. The project opening ceremony allowed the IF management team, the Investment Committee, and the advisory board to discuss the project objectives and to showcase their institutional capacities transparently, a move that assuaged the initial skepticism of the entrepreneurial and the research communities. The project closing ceremony celebrated the advances made by the innovation ecosystem over the course of the project, showcasing the more than fifty entrepreneurs who displayed their products and prototypes, the investor groups that supported the start-ups and spin-offs, and the IF and the RDIs that strengthened their capacity to help stimulate innovation by enterprises.

### 14. Assessment Recommended?

No

### 15. Comments on Quality of ICR



The strengths of the ICR are:

One, the document is concise. The ICR clearly summarizes the background of the innovation project. The project components and activities are listed in a straightforward manner. The project results, in terms of the values of the project outputs and outcomes, are tallied clearly. The discussion of the efficacy of the project is simple and to the point. The analysis of the Bank's and the Government's performance is brief but comprehensive.

Two, the analysis of project implementation issues is candid. The ICR states that the Government over-estimated the capacity of the IF to handle two rounds of calls for proposals at the outset. The first call for proposal for matching grants was scaled down to a pilot. The ICR also states that the Government failed to support the IF with operating funds in early 2014. The lack of funds caused a departure of staff and slowed down project implementation for half a year.

Three, the assessment of the project results is evidence-based. The ICR uses the output and outcome indicators to judge the degree of achievement of the project objective. The ICR (pages 29-31) documents 10 of the 41 projects awarded mini grants by the project, and documents five of the 11 projects awarded matching grants. The ICR (pages 32-38) cites 10 of the research development institutions (RDIs) considered for detailed and limited technical assistance, describing the technical services extended by the project to the RDIs, and detailing the commercialization activities pursued by four of the RDIs, including the results of their efforts.

Overall, the ICR was written following OPCS guidelines. The one weakness of the ICR is that it had initially failed to adequately assess the economic efficiency of the project. The ICR (page 17) basically used evidence advanced for judging the efficacy of the project to argue for the efficiency of the project. To rectify the deficiency, new cost-based efficiency data were presented during ICR review to argue for the efficiency of the IF's operations during the life of the project.

a. **Quality of ICR Rating**  
**Substantial**