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DOMINICAN REPUBLIC

BUILDING THE CAPACITIES OF YOUNG PEOPLE TO DEVELOP INTERACTIVE DIGITAL TECHNOLOGIES

(DR-T1152)

DONORS MEMORANDUM

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PROJECT SUMMARY
BUILDING THE CAPACITIES OF YOUNG PEOPLE TO DEVELOP
INTERACTIVE DIGITAL TECHNOLOGIES

For some 15 years, the public sector in the Dominican Republic has been laying the foundation to prepare the country and position it in the technology sector. Despite efforts to build confined spaces for technology development, problems with training human resources pose a challenge to tapping new emerging markets connected to the high-tech sector. Technologies related to interactive digital content in virtual reality (VR) and augmented reality (AR) are part of the information and communication technologies (ICT) segment. Globally, this is the segment in this sector experiencing the strongest growth. By 2022, the market for these technologies is expected to be worth nearly US\$33.9 billion.

Tapping this emerging market requires having specialized human resources able to offer services to high-tech companies or to start their own ventures. Nevertheless, in the Dominican Republic the lack of institutions specialized in information technology; the scarcity of trained human capital able to use, adopt, and generate innovations; the difficulty faced by small and medium-sized software developers in accessing markets; and a basic curriculum in teaching programs at technology-training centers constitute barriers preventing the country from better positioning itself in the technology sector vis-à-vis other countries in the region. Along with the emergence of a potential high-tech market for developing interactive digital content, this is an opportunity to explore pilot public-private partnership programs to transfer technical expertise to young people.

To overcome these constraints, the proposed initiative aims to utilize the cooperation agreement between EON Reality, a global leader in the transfer of knowledge and the development of interactive digital technologies, and Parque Cibernético de Santo Domingo [Santo Domingo Cyberpark]. Hence, the primary objective of the proposed project is to raise the quality of Dominican labor in interactive digital technologies (augmented virtual reality) and thus enhance the country's role in the global high-tech market. To do so, project execution will focus on the following lines of action: (i) training human resources in generating digital content; (ii) developing interactive business and/or learning solutions for public and private institutions; and (iii) job placement and the development of ventures.

The project is expected to have the following outcomes: (i) at least 50 technology training centers adapt their curriculum based on the model developed; (ii) at least 200 young people who have received training find employment or start ventures developing software with interactive digital technologies; (iii) the income of program participants increases by at least 75%; and (iv) at least 3,000 young people at Community Training Centers and polytechnic institutes enhance their knowledge of augmented virtual reality.

This is an innovative proposal, given that it calls for establishing the first Interactive Digital Hub in the Central American and Caribbean region and is the first attempt to update the curricula for emerging technical courses of study within the ICT segment. The project is aligned with the "productive development and competitiveness" pillar of the Bank's country strategy for 2013-2016; with the Innovation, Science, and Technology Sector Framework in terms of increasing the availability of highly skilled human capital; and with the IDB Institutional Strategy for 2016-2019, specifically by increasing productivity and innovation, developing high-quality human capital, and establishing adequate knowledge and innovation ecosystems.

ANNEXES

Annex I	Results matrix
Annex II	Summary budget

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Proposed resolution

**INFORMATION AVAILABLE IN THE TECHNICAL DOCUMENTS SECTION OF THE
MIF PROJECT INFORMATION SYSTEM**

Annex III	Itemized budget
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Annex V	Project status reports, achievement of milestones, and fiduciary arrangements
Annex VI	Procurement plan
Annex VII	Structure of the execution unit

ABBREVIATIONS

AR	Augmented reality
AVR	augmented virtual reality
CIDH	Caribbean Interactive Digital Hub
CTC	Community Technological Centers
CTI	Competitiveness and Innovation Division
ICT	Information and communication technologies
IT	Information technology
ITLA	Instituto Tecnológico de Las Américas [Technological Institute of the Americas]
MESCyT	Ministry of Higher Education, Science, and Technology
MINERD	Ministry of Education
MITUR	Ministry of Tourism
PCSD	Parque Cibernético de Santo Domingo [Santo Domingo Cyberpark]
SEP	Social Entrepreneurship Program
SMEs	Small and medium-sized enterprises
VR	Virtual reality

DOMINICAN REPUBLIC
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INTERACTIVE DIGITAL TECHNOLOGIES
(DR-T1152)

EXECUTIVE SUMMARY

Country and geographic location:	Dominican Republic: Santo Domingo, the National District, and the remaining provinces.		
Executing partner:	Parque Cibernético de Santo Domingo [Santo Domingo Cyberpark] (PCSD).		
Focus area:	This project is part of the knowledge economy pillar, focusing in particular on creating a workforce with skills and competencies with a high level of expertise that help consolidate one of the fastest-growing industries that has the strongest outlook.		
Coordination with other donors/Bank operations:	Competitiveness and Innovation Division (CTI).		
Project clients:	This project will directly benefit 3,400 persons, as follows: (i) 10 facilitators and 290 young people at the Caribbean Interactive Digital Hub (CIDH); and (ii) 100 facilitators and 3,000 students from Community Technological Centers and polytechnic institutes. The project will benefit different sectors such as tourism, sports, and health by developing virtual and augmented reality applications that meet training and marketing needs.		
Financing:	Technical cooperation:	US\$ 957,105	13%
	Investment:	-	
	Loan:	-	
	Other (explain):	-	
	TOTAL MIF CONTRIBUTION:	US\$ 957,105	13%
	COUNTERPART:	US\$ 6,270,315	87%
	Cofinancing (if any; include a separate line for IDB cofinancing, if applicable):		
	PROJECT TOTAL:	US\$ 7,227,420	100%
Execution and disbursement period:	36 months for execution and disbursements.		

**Special
contractual
conditions:**

Conditions precedent to the first disbursement: (i) project Operating Regulations with the no objection of the MIF; (ii) annual work plan; (iii) contracting of the coordinator with the no objection of the MIF; and (iv) the signed agreement between the PCSD and EON to establish the Caribbean Interactive Digital Hub (CIDH).

**Environmental
and social
impact review:**

This operation was screened and classified according to the IDB's Environment and Safeguards Compliance Policy (OP-703) on 5 August 2016. As the impacts and risks are limited, it is proposed that this be classified as a Category "C" operation.

I. THE PROBLEM TO BE ADDRESSED

A. Description

- 1.1 **Country context.** In recent years, new, high-potential subsectors with the capacity to add value to the economy have emerged in the Dominican Republic, leading to a significant diversification of production. The amendment to the implementing regulations of the Law for the Promotion of Free Trade Zones¹ created an incentive for companies that process and/or industrialize agricultural products and for service providers, especially those in the telecommunications sector, to enter the special free trade zone regime. This amendment allowed call centers to become one of the largest sources of the creation of skilled technical jobs in the country. By the end of 2016, 35,000² jobs are expected to have been created in this subsector, equivalent to 4% of all new jobs in the formal economy. The growth potential for this subsector was a key factor in developing the government's 2016-2020 Digital Republic initiative, which aims to establish technological communication centers in strategic points in the country as part of an effort to position the Dominican Republic in the technology sector and tap the fastest-growing global markets.
- 1.2 **Demand for high-tech services.** Technologies related to interactive digital content in virtual reality (VR) and augmented reality (AR) are part of the information and communication technologies (ICT) segment, which globally is the fastest-growing segment of the technology sector. The market for these technologies is expected to increase to US\$33.9 billion by 2022,³ which is equivalent to an annual growth rate of 52%. From 2014 to 2015, the recruiting sites SmartRecruiters, LinkedIn, and Indeed.com saw an 800% increase in demand for human resources able to offer these services and indicate that technological advancements will translate into a further boost in demand. In particular, these technologies have proven to be instrumental for a rapid absorption of knowledge in learning and sports⁴ and to be highly effective in business, entertainment, and advertising.
- 1.3 AVR applications developed for education have created a new way for children and young people to concentrate more and learn while having fun, leading many companies to try to make inroads in this new market in recent years. In Spain, the store Imaginarium and the Mahei company have developed AR-based applications for using a tablet to interact with physical toys. In medicine, there are numerous AVR applications, from telerehabilitation to simplifying surgery or treating psychological illnesses such as phobias. In sports, a team of researchers at Bielefeld University in Germany has devised a VR system to optimize sports training. Athletes use this

¹ Amendment and entry into force of the implementing regulations of Law 8-90 on the Promotion of Free Trade Zones, in August 2004.

² Análisis de Coyuntura Internacional 2016, Central Bank of the Dominican Republic.

³ Markets and Markets Research, July 2016.

⁴ According to an article by the [BBC](#), VR/AR transfers knowledge more efficiently. The article cites a study according to which 86% of the students in one classroom improved their test results with 3D lessons compared with a traditional learning environment, while attention levels were twice as high (92% vs. 46%). According to [UNESCO](#), **VR increases comprehension, understanding and, especially, motivation for learning**. According to Singapore's National Institute of Education, [African VR Survey of United Nations](#), modern understanding of the human brain shows that the area of the cerebral cortex used for processing visual information is of one order of magnitude more powerful than the area responsible for processing text and voice. According to the publication [Sophic Capital](#), the healthcare industry is set to adopt VR to lower practitioner and patient costs with a market that could be worth US\$1.9 billion by 2017.

platform to enhance their performance, visualize how exercises are done, and work on mobility problems caused by injury or illness.

- 1.4 Large global technology companies, including Apple, Google, Microsoft, Amazon, Facebook, Samsung, and Sony, are making sizable investments and deploying technical efforts to develop more applications and devices to meet demand in this market.⁵ Globally, many small and medium-sized enterprises (SMEs) have been created to serve this market, while others are seeking human resources capable of adding more value to their existing services.
- 1.5 **Technology sector and content development in the Dominican Republic.** According to the Directorio de Establecimientos y Empresas [Directory of Establishments and Enterprises] of the 1,284 information technology-related SMEs registered in 2013, 338 were involved in computer programming, IT consulting, and related activities and employed a small staff—fewer than nine employees. Given that 312 enterprises were registered in this line of business in 2012, there was an 8.33% increase in such companies. Although the Dominican Republic has neither companies nor human resources prepared to take advantage of market niches resulting from the growth of new interactive digital technologies, there is incipient demand for AVR-based applications and devices in both the public and private sectors. One example of this local demand is the tourism sector, which has begun using this type of technology to promote tourist attractions by offering 360° immersion experiences in promotional activities of the Ministry of Tourism (MITUR) in order to publicize adventure tourism or ecotourism offerings in such destinations as Punta Cana, Puerto Plata, and Samaná. MITUR recently hired a foreign company to provide services using this technology owing to the lack of local capacity.
- 1.6 **Training young people in the high-tech sector.** In the training of young people, the Dominican government is broadening its educational curriculum, and one priority of this effort is to meet needs in educational and technology innovation. One initiative for providing training in technology has been to establish Community Technological Centers (CTCs)⁶ and the Technological Institute of the Americas (ITLA). The Boca Chica CTC, together with Civil Innovation Lab and Club Itinerante Clave, recently launched an initiative to train young people and adolescents in the involvement in and use and impact of networks and the basic use of AVR devices through cameras and products like Google Glass. In terms of more technical training, the programs have focused on certification in using and designing network infrastructure and developing traditional software. According to an ITLA employability report, 90%⁷ of the students who completed academic programs in network infrastructure and software development are currently employed in their fields. This underscores the demand for this type of specialization and the effects of targeted programs when carried out in an immersion environment that enhances learning levels.

⁵ Google alone has invested US\$542 million in the Magic Leap content developer. Facebook acquired Oculus, an AVR-content and device developer, for US\$2 billion.

⁶ <http://www.ctc.edu.do/noticias/ctcs/item/571-capacitan-ni%C3%B1os-y-adolescentes-en-programaci%C3%B3n>.

⁷ Informe de empleabilidad, ITLA, 2010-2015.

- 1.7 **Assessment of the diagnosis of the problem.** Despite government efforts, the Dominican Republic still has considerable barriers to tapping opportunities in high-tech markets. They include:
- a. A lack of institutions specialized in cutting-edge information technology;
 - b. The continued scarcity of human capital trained to use, adopt, and generate new innovations;
 - c. Teaching and research programs at software-training institutions that are at a basic level;
 - d. The difficulties small and medium-sized software developers face in accessing new markets given the small local market for high-tech products/services;
 - e. The private sector's unfamiliarity with these technologies and their advantages for learning and business promotion, which limits financing for locally developed entrepreneurial initiatives.
- 1.8 In 2016, the PCSD signed an investment agreement with EON Reality, a leading developer of AVR interactive digital content, to set up shop and utilize the PCSD's facilities to meet the demand for this technology in the Caribbean and Central America. In the Dominican Republic, since 2000 the public sector has been laying the foundation to prepare the country and position it in the technology sector. In addition, a potential high-tech market for developing interactive digital content has emerged. This represents an opportunity to explore pilot public-private partnership programs to transfer knowledge to young people who can develop digital content, in order to enhance learning capacity in such sectors as medicine, engineering, and sports, and thereby allow young people to find better-paid jobs with higher value added.

II. THE INNOVATION PROPOSAL

A. Description

- 2.1 **Objective.** The project's objective is to improve the capacity of Dominican labor to develop interactive digital technologies (AVR) and thus increase the country's share of the global high-tech market. To this end, the project will implement a training program for young women and men in developing interactive digital content in augmented virtual reality.
- 2.2 **Description of the model/solution/intervention.** The model aims to utilize an existing cooperation agreement between EON Reality, a global leader in the transfer of knowledge and the development of interactive digital technologies, and the Santo Domingo Cyberpark (PCSD), so as to develop a pilot training program to prepare a first cohort of developers specialized in digital applications and content based on AVR platforms. Graduates of this program will be able to enter the labor force in better-paid jobs with higher value added at the Caribbean Interactive Digital Hub (CIDH) to be set up at the PCSD or to establish their own ventures offering services based on this technology. The business model is as follows:
- A. Human resources training.** The project will select a group of 300 young people over a period of three years with basic skills in developing digital applications and content in terms of software, audiovisual, and multimedia

development, as well as graphic-arts and creative-design skills. They will be trained using the EON Innovation Academy's curriculum, which covers 16 modules over the course of one year. In addition, 3,000 young people from the Community Technological Centers and polytechnic institutes in the country will be selected for basic training (five modules) in creative thinking and multimedia programming at the CTCs. This will make them eligible to apply for the complete training at the CIDH's Innovation Academy. To that end, the project includes basic instructor training for a group of facilitators from the CTCs and polytechnic institutes through an 80-hour program on the educational use of AVR digital platforms, which they can later replicate in at least 30 communities.

The project calls for including low-income young people and, in particular, for 35% of the selected participants to be young women. Thus, there will be competitions specifically targeting women. The skills required for participation offer an opportunity for young women to play an active role in developing digital solutions.

B. Development of interactive digital solutions. After receiving the training, and in line with the experiences of training centers elsewhere in the world,⁸ the young people will develop solutions, primarily in healthcare, education and job training, tourism, and edutainment. In light of the eminently practical approach of the training process, EON Reality will ensure that projects are sent from its headquarters that can be used for the first trials of commercial applications. In addition, based on the interest already expressed, partnerships will be established with various public and private institutions, including the Offices of the President and Vice President of the Republic, which are promoting the Digital Republic project in conjunction with the Ministry of Education (MINERD) and the Ministry of Higher Education, Science, and Technology (MESCyT); the Ministry of Tourism (MITUR); the Ministry of Culture, to develop applications and content for tourist attractions at historical centers and for ecotourism; the Ministry of Public Health and the consortium of medical schools at five of the country's leading universities, to develop digital content related to training practitioners and university students in the health field; and baseball teams, the Players' Association, and Major League Baseball, to develop applications and content to be used by baseball academies in the country, in particular to improve batting and pitching performance.

C. Job placement and development of ventures. Program graduates will have the opportunity to find service jobs at the Cyberpark's Interactive Digital Hub. Those who wish to continue in the sector by starting their own ventures will be supported by the program in developing business plans and with training at local business accelerators and incubators⁹ before they move on to the investment round and/or seek assistance from financial institutions interested in investing in and/or financing innovative ventures.

⁸ Laval, France, and Mexico City.

⁹ Empreende, business centers at universities, such as INTEC, UNIBE, UNPHU, and PUCCM.

- 2.3 **Innovation.** The CIDH will be the first such center to be established in Central America and the Caribbean. Its effects will be quickly gauged, including its contribution to creating high value-added jobs, as well as to the value of its content exports and global applications. The agreement between PCSD and EON envisages making the Dominican Republic the leading global hub for developing, producing, and exporting sports solutions on virtual platforms, primarily linked to the baseball industry, where the Dominican Republic already stands out for its involvement in Major League baseball in the United States. The country would also become a center of excellence for developing, producing, and exporting VR/AR solutions in tourism and healthcare, among other areas.
- 2.4 **Additionality.** The MIF will add value to the selection of young people and adaptation of EON Reality's curriculum for training in interactive content development. Specifically, the MIF will ensure gender equity in the selection of young people to take part in the teaching model and that participants' socioeconomic status is taken into account so that not only those from the leading technological-training centers are chosen. Regarding EON's curriculum, MIF participation ensures the adaptation of its content to provide instruction through bootcamps for 3,000 young people throughout the country, outside of the PCSD's facilities.

B. Components

- 2.5 **Component I: Human resources trained in developing interactive digital content. MIF: US\$626,755; Counterpart: US\$6.1 million.** This component will lay the foundation for a one-year training program for each cohort of 100 young people using EON Reality's curriculum. The component will focus on:
- a. **Establishing the Interactive Digital Hub.** Under the EON-PCSD agreement, the Caribbean Interactive Digital Hub will be established at the Cyberpark's facilities. The agreement entails outfitting the space where the training center will operate and where students will receive training for one year.
 - b. **Developing training workshops.** The young people will be selected from the Community Technological Centers, polytechnic institutes, and institutions of higher education. Training will be provided for two segments: 300 young people will receive training in the complete curriculum on developing interactive content, and approximately 3,000 young people from Community Technological Centers and polytechnic institutes will be enrolled in a bootcamp to improve their knowledge of interactive digital technologies, allowing them to apply for the 300 slots to be made available at the CIDH.
 - c. **Creating enterprises.** For those who decide to start their own ventures, there will be business plan development competitions for startups that extensively use AR and VR technologies. There will be two rounds starting in the second and third year, and support will later be given for the incubation of the business models that emerge, so they can subsequently be channeled to networks of investors and/or financial institutions.
- 2.6 **Component II: Public and private institutions require interactive technological services applied to business and/or education. MIF: US\$46,000; Counterpart: US\$28,500.** The objective of this component is to make the public and private sectors aware of the advantages of using AVR technology, particularly in teaching

and to promote products and/or services in tourism, education, sports, healthcare, and industry. To do so, the following aspects will be emphasized:

- a. **Raising awareness of the advantages of using this technology.** Various workshops will be given by international experts, and studies on the benefits for learning and business will be promoted. The technology's capacity to facilitate an interactive form of teaching that stimulates, motivates, and improves comprehension in instructional activities for company employees and/or students will be demonstrated.¹⁰ The use of AVR platforms to promote these platforms as an additional channel for commercial and edutainment purposes will also be emphasized. Workshops will be held specifically for the financial sector and local entrepreneurs on the economic advantages of serving this market, to encourage investments in and/or financing of AVR-related entrepreneurial initiatives. These efforts are expected to result in at least five public and private sector institutions requesting AVR services.
- b. **Developing content for local entities.** Through the initiative, a unit that will form partnerships with the public and private sectors would be established as a result of the interest generated in using the technology. The Ministry of Tourism has been approached about promoting tourist destinations through operation DR-L1035: Tourism Development Program - Colonial City of Santo Domingo, to develop commercial content for museums and tourist attractions. In addition, several Major League baseball academies in the country have shown interest in developing content for batting and pitching practice with their respective teams. The medical schools at universities such as the Pontificia Universidad Católica Madre y Maestra are interested in developing educational applications for students. Another area of activity is the development of digital content for training young people in engineering internships at the 21 polytechnic institutes supported by operation DR-M1044: Quisqueya Believes in You (NEO-RD).

2.7 **Component III: Knowledge generation and dissemination. MIF: US\$76,150; Counterpart: US\$73,750.** This component is essential given the emerging nature of interactive digital technologies and the lack of knowledge on their use. The objective will be to help narrow knowledge gaps on the educational and commercial uses of interactive digital technologies. The key local audiences include MESCyT, MINERD, Community Technological Centers, institutions of higher education, and financial and business institutions. Regionally, the initiative will be promoted among organizations including the Central American Integration System, the Caribbean Community, and the Central American Bank for Economic Integration, as well as public and private sector institutions.

- a. **Systematizing the intervention model.** This phase of the project will systematize and document the intervention model, including with steps to secure resources for establishing a training center, establishing curricular content, selecting students, and the training process. To this end, funding will be provided for: (i) an interactive audiovisual; and (ii) a case study for the other audiences to learn about, replicate, and/or scale up the intervention.

¹⁰ See "Evaluation of Virtual Reality in Africa: An Educational Perspective." 2004. UNESCO.

- b. **Disseminating the model.** To disseminate the model, with the support of EON Reality and local sponsors, two events will be held featuring national and international speakers as well as persons familiar with and interested in the model, as a way to position the Dominican Republic as a regional hub for developing interactive technologies.

C. Outcomes, measurement, and project monitoring and evaluation

- 2.8 The main project indicators include: 200 young people find employment or establish ventures after completing the AVR training; the wages of employed young people increase by 75%; and 3,000 young people use AVR technology to enhance their knowledge after completing the bootcamp.
- 2.9 The CIDH information system and records from the Community Technological Centers and polytechnic institutes will be used to monitor the project. The information will be disaggregated by age, gender, and contracts carried out. The project will also include a midterm evaluation to assess the operation of the project and identify areas for improvement. The midterm evaluation will focus on technical areas and areas identified as involving greater complexity where actions are required to correct implementation.
- 2.10 The monitoring system will be designed to gather sufficient information to track young people once they conclude their training programs, so as to determine employability and/or venture development starting six months after each cohort has completed its studies, for the three years of the project.

III. ALIGNMENT WITH THE IDB GROUP, SCALABILITY, AND RISKS

A. Alignment with the IDB Group

- 3.1 **The Bank's Country Strategy 2013-2016.** The project is aligned with pillar 6 of the Bank's country strategy, "productive development and competitiveness," as it helps facilitate connectivity and integration into the marketplace by allowing young people to acquire skills needed in the global economy. It also bolsters the country strategy's education pillar by developing content to accelerate learning.
- 3.2 **Innovation, Science, and Technology Sector Framework.** The project is aligned with two of the IDB's five priorities for action in innovation, science, and technology. In particular, the initiative dovetails with dimensions 2 and 3 of the Innovation, Science, and Technology Sector Framework, which call for increased availability of highly skilled human capital and higher investment in science, technology, and innovation.
- 3.3 **IDB Institutional Strategy 2016-2019.** The project is aligned with the following strategic priorities: (i) boosting productivity and innovation by developing quality human capital and providing adequate knowledge and innovation ecosystems; and (ii) promoting regional integration, by supporting the insertion of firms into value chains.
- 3.4 **Business plan of the Inter-American Investment Corporation 2016-2019.** The initiative dovetails with two of the five strategic-priority areas of the Corporation's business plan, as it: (i) supports the development of micro, small and medium-sized enterprises; and (ii) fosters innovation and technology.

B. Scalability

- 3.5 Through the MESCyT, the curriculum of technical courses of study related to ICT will be adjusted. This will allow students in these technical fields to enhance their knowledge of interactive digital technologies. Moreover, although the CIDH will initially be able to meet demand in the Caribbean, the project, together with EON Reality, will systematize the model in the Dominican Republic so as to seek partners in Panama, Guatemala, and especially Costa Rica in order to explore the possibility of establishing new interactive digital hubs. The global network of interactive digital hubs currently operated by EON not only in the United States but also in such countries as England, France, Mexico, the United Arab Emirates, and Egypt will significantly strengthen ties of cooperation for carrying out joint efforts with those and other countries around the world.¹¹
- 3.6 The project will serve as a model for the fourth pillar of the government's Digital Republic initiative, incorporating the training model developed at the new CTCs in various places in the country.¹² In the proposed budget for 2017, the authorities included US\$26 million to kick off the initiative.

C. Project and institutional risks

- 3.7 **Establishing the Caribbean Interactive Digital Hub (CIDH).** The possibility that the CIDH will not be established is the greatest risk of the operation, given that the innovation school where 300 students are to be trained using the EON Reality curriculum is to be created in the CIDH. Any delay could also push back the attainment of project objectives. To mitigate any delay in outfitting the facilities, the operations activities could begin in the PCSD's training rooms.
- 3.8 **Low rate of acceptance for financing entrepreneurs.** Although activities have been carried out to demonstrate the economic benefits of similar models in other locations, if investors are not willing to take the risk of supporting the emerging entrepreneurs, some of the project's objectives could be undermined. To mitigate this risk, training sessions will be held for financial intermediaries and investment fund associations in the Dominican Republic, in order to broaden the range of options for securing financing for ventures emanating from the project.
- 3.9 **Low public and private sector demand for content development in the Dominican Republic.** If local demand for digital content is insufficient, EON Reality will send some of its regional projects to the CIDH in order to support the training with real projects as well as to ensure the generation of revenue.

IV. INSTRUMENT AND PROPOSED BUDGET

- 4.1 The total project cost is **US\$7,227,420**, of which **US\$957,105 (13%)** will be contributed by MIF; the PCSD¹³ will contribute US\$6,083,315 in cash (84%) and

¹¹ EON has the world's largest VR network for developing and transferring knowledge. With a broad global reach, it has offices on six continents (<http://youtu.be/WqPjmKBj3kw>) including 11 offices and 15 interactive digital centers. Its main branches are in Sweden, Singapore, the United States, Saudi Arabia, Qatar, Korea, the United Arab Emirates, Russia, Portugal, and France.

¹² See: República Digital Pílares, February 2016.

¹³ Contributed under the agreement established between EON-PCSD.

US\$187,000 (3%) in kind, bringing the total counterpart contribution to **US\$6,270,315 (87%)**. The MIF will use nonreimbursable technical cooperation.

	MIF	Counterpart Cash	Counterpart In kind	Total
Project components				
Component 1: Human resources trained in developing interactive digital content	626,755	5,972,065	160,000	6,758,820
Component 2: Public and private institutions require interactive technological services applied to business and/or education	46,000	28,500	-	74,500
Component 3: Knowledge generation and dissemination	76,150	73,750	-	149,900
Project administration (cost of the execution unit)	126,200	9,000	27,000	162,200
Midterm and final evaluation (if applicable)	20,000	-	-	20,000
Ex post reviews	15,000	-	-	15,000
Monitoring system	15,000	-	-	15,000
Kickoff workshops	2,000	-	-	2,000
Contingencies	30,000	-	-	30,000
GRAND TOTAL	957,105	6,083,315	187,000	7,227,420
% financing	13%	84%	3%	100%

V. EXECUTING AGENCY AND IMPLEMENTATION STRUCTURE

A. Description of the executing agency

- 5.1 The Santo Domingo Cyberpark (PCSD) is the executing agency of this project and will sign the agreement with the Bank. The PCSD (www.pcsd.com.do) is the main ecosystem for innovation and support for technology ventures in the Caribbean. Established in 2000, it has several interrelated components, including the Technological Institute of the Americas (www.itla.edu.do), the Emprende technological-business incubator, and the first technological free trade zone, which has some 20 enterprises that directly employ nearly 2,000 people in information technology-business process outsourcing services, high-tech manufacturing, and biotechnology.
- 5.2 The Cyberpark together with the incubator, Emprende, created the first network of angel investors in the Dominican Republic, ENLACES. Operation ATN/ME-10813-DR, financed by the MIF in 2009, laid the foundations for establishing the entrepreneurial ecosystem in the Dominican Republic. Entrepreneurial centers were developed at 12 universities with the support of the MESCyT and the first seed-capital investment fund for start-ups. Investments totaling US\$200,000 have been made in ventures thus far.
- 5.3 EON Reality (www.eonreality.com), established in Irvine, California, and PCSD have agreed to a regional hub for developing digital technologies based on VR and AR

platforms. This hub, the CIDH, is expected to have several fundamental components, in particular a training academy on VR/AR solutions for knowledge transfer, as well as a center for developing and producing corporate solutions. EON has developed a platform that promotes creativity, offering business and training solutions that personalize the learning process, allowing knowledge to be assimilated 30% faster than through traditional methods.

B. Structure and implementation mechanism

- 5.4 The PCSD will establish an execution unit and the structure for effectively and efficiently carrying out project activities and managing project resources. It will also be responsible for submitting progress reports on project implementation. Details on the structure of the execution unit can be found in Annex VII in the technical files for this operation.
- 5.5 The execution unit will be made up of the president of the PCSD, who will oversee the project coordinator and the accountant-administrator. The project coordinator is responsible for executing the project, ensuring the objectives are met and the commitments assumed are fulfilled. The coordinator's role and responsibilities and the project's organizational structure are detailed in the project Operating Regulations (a condition precedent to the first disbursement).
- 5.6 The procurement plan provides for US\$25,000 in direct contracting to provide technical assistance to support ventures arising under the program. Specifically, Emprede, the dynamic enterprises incubator located in the PCSD, will be hired to support the incubation process for at least five ventures, for a maximum of US\$10,000 each. It should be noted that 50% will be provided by Emprede in kind.
- 5.7 One year before the end of execution, a sustainability workshop will be held with all entities involved to identify the measures for ensuring the continuity of the project's actions once all the funds have been disbursed.

VI. ACHIEVEMENT OF MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS

- 6.1 **Results-based disbursements and fiduciary arrangements.** The executing agency will commit to the standard MIF arrangements regarding results-based disbursements and the Bank's current procurement policies,¹⁴ in particular Appendix 4 of the policies for the selection and contracting of consultants and the policies for the procurement of goods and works financed by the Bank, together with the operational guidelines for procurement in nonreimbursable technical cooperation operations. For financial management, the executing agency will ensure compliance with the financial management policy for IDB-financed projects¹⁵ through the guide for managing milestones and financial supervision for MIF and SEP technical cooperation projects, as specified in Annex V.
- 6.2 The executing agency is a public-private entity that, according to the findings of the diagnostic needs assessment in Annex IV, has a medium level of risk and is

¹⁴ Link to the [Policies for the Procurement of Works and Goods Financed by the Inter-American Development Bank and Policies for the Selection of Consultants](#).

¹⁵ Link to the [Financial Management Guide for Projects Financed by the Inter-American Development Bank](#).

therefore eligible for ex post review of procurement processes for goods and services and of aspects related to disbursements and financial management.