

115TH CONGRESS
1ST SESSION

S. 1904

To promote the use of smart technologies and systems in communities, and
for other purposes.

IN THE SENATE OF THE UNITED STATES

OCTOBER 2, 2017

Ms. CANTWELL introduced the following bill; which was read twice and
referred to the Committee on Commerce, Science, and Transportation

A BILL

To promote the use of smart technologies and systems in
communities, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) **SHORT TITLE.**—This Act may be cited as the
5 “Smart Cities and Communities Act of 2017”.

6 (b) **TABLE OF CONTENTS.**—The table of contents for
7 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Purpose.
- Sec. 3. Definitions.

TITLE I—ENHANCING FEDERAL COORDINATION AND
INVESTMENT IN SMART CITY OR COMMUNITY PROGRAMS

Sec. 101. Coordination of activities among Federal agencies.
 Sec. 102. Smart city and community resource guide.

TITLE II—PROVIDING ASSISTANCE TO CITIES AND COMMUNITIES

Sec. 201. Technology demonstration grant program.
 Sec. 202. Cybersecurity Working Group.
 Sec. 203. TechHire Workforce Training and Development Program.
 Sec. 204. GAO study on innovative financing.

TITLE III—IMPROVING PERFORMANCE AND INTEROPERABILITY

Sec. 301. Standards and interoperability framework.

TITLE IV—INTERNATIONAL COOPERATION AND BEST PRACTICES

Sec. 401. Development of global smart city or community best practices.
 Sec. 402. Trade program.

1 **SEC. 2. PURPOSE.**

2 The purpose of this Act is to promote smart tech-
 3 nologies and systems to improve community livability,
 4 services, communication, safety, mobility, energy produc-
 5 tivity, and resilience to natural and manmade disasters,
 6 to reduce costs, traffic congestion, and air pollution, and
 7 to promote economic growth and opportunities for commu-
 8 nities of all sizes by—

9 (1) improving Federal Government coordination
 10 and outreach with respect to smart city or commu-
 11 nity technologies;

12 (2) promoting the quality and performance of
 13 smart city or community technologies while pro-
 14 tecting—

15 (A) the security of data and systems; and

16 (B) privacy;

1 (3) demonstrating the value and utility of
2 smart, local government-owned and -operated serv-
3 ices through the development and implementation of
4 performance standards;

5 (4) providing assistance to local governments
6 interested in implementing smart city or community
7 technologies;

8 (5) developing a workforce skilled in smart city
9 or community technologies; and

10 (6) expanding international cooperation and
11 trade in smart city or community technologies.

12 **SEC. 3. DEFINITIONS.**

13 In this Act:

14 (1) COUNCIL.—The term “Council” means the
15 Interagency Council on Smart Cities established
16 under section 101(a)(1)(A)(i).

17 (2) DATA.—The term “data” includes informa-
18 tion and images.

19 (3) LOCAL WORKFORCE DEVELOPMENT BOARD;
20 STATE WORKFORCE DEVELOPMENT BOARD.—The
21 terms “local workforce development board” and
22 “State workforce development board” have the
23 meanings given the terms “local board” and “State
24 board”, respectively, in section 3 of the Workforce
25 Innovation and Opportunity Act (29 U.S.C. 3102).

1 (4) SECRETARIES.—The term “Secretaries”
2 means the Secretary, acting in coordination with—

3 (A) the Secretary of Energy;

4 (B) the Secretary of Housing and Urban
5 Development;

6 (C) the Secretary of Transportation;

7 (D) the Director of the National Science
8 Foundation; and

9 (E) as the Secretary determines to be ap-
10 propriate—

11 (i) the Secretary of Health and
12 Human Services;

13 (ii) the Secretary of Homeland Secu-
14 rity;

15 (iii) the Secretary of Labor; and

16 (iv) the Secretary of State.

17 (5) SECRETARY.—The term “Secretary” means
18 the Secretary of Commerce.

19 (6) SMART CITY OR COMMUNITY.—

20 (A) IN GENERAL.—The term “smart city
21 or community” means a community in which
22 innovative, advanced, and trustworthy informa-
23 tion, communication, and energy technologies
24 and related mechanisms are applied—

1 (i) to improve the health and quality
2 of life of residents;

3 (ii) to increase the efficiency and cost
4 effectiveness of civic operations and serv-
5 ices;

6 (iii) to promote economic growth; and

7 (iv) to create a community that is
8 safer and more secure, sustainable, resil-
9 ient, livable, and workable.

10 (B) INCLUSIONS.—The term “smart city
11 or community” includes a local jurisdiction
12 that—

13 (i) gathers and incorporates data from
14 systems, devices, and sensors embedded in
15 civic systems and infrastructure to improve
16 the effectiveness and efficiency of civic op-
17 erations and services;

18 (ii) aggregates and analyzes gathered
19 data;

20 (iii) communicates the analysis and
21 data in a variety of formats;

22 (iv) makes corresponding improve-
23 ments to civic systems and services based
24 on gathered data;

1 (v) coordinates with relevant public
2 and private sector entities (including enti-
3 ties providing electric, water, telecommuni-
4 cations, energy, and transportation serv-
5 ices) to leverage the activities carried out
6 by those entities;

7 (vi) integrates measures—

8 (I) to ensure the resilience of
9 civic systems against cybersecurity
10 threats and physical vulnerabilities
11 and breaches;

12 (II) to protect the private data of
13 residents; and

14 (III) to measure the impact of
15 smart city or community technologies
16 on the effectiveness and efficiency of
17 civic operations and services; and

18 (vii) promotes regional coordination of
19 the activities described in clauses (i)
20 through (vi).

21 (7) STATE.—The term “State” means—

22 (A) a State;

23 (B) the District of Columbia;

24 (C) the Commonwealth of Puerto Rico;

25 and

1 (D) any other territory or possession of the
2 United States.

3 (8) WORKING GROUP.—The term “Working
4 Group” means the Cybersecurity Working Group es-
5 tablished under section 202(b)(1).

6 **TITLE I—ENHANCING FEDERAL**
7 **COORDINATION AND INVEST-**
8 **MENT IN SMART CITY OR**
9 **COMMUNITY PROGRAMS**

10 **SEC. 101. COORDINATION OF ACTIVITIES AMONG FEDERAL**
11 **AGENCIES.**

12 (a) COORDINATION.—

13 (1) COORDINATION OF ACTIVITIES.—

14 (A) FEDERAL COUNCIL.—

15 (i) ESTABLISHMENT.—The Secre-
16 taries shall establish a council of Federal
17 agencies, to be known as the “Interagency
18 Council on Smart Cities”, to promote the
19 coordination of the activities and funding
20 from Federal agencies relating to smart
21 cities or communities.

22 (ii) MEMBERSHIP.—The Council
23 shall—

24 (I) be led by the Secretary; and

25 (II) include—

1 (aa) the Secretary of En-
2 ergy;

3 (bb) the Secretary of Hous-
4 ing and Urban Development;

5 (cc) the Secretary of Trans-
6 portation;

7 (dd) the Director of the Na-
8 tional Science Foundation;

9 (ee) the heads of such other
10 departments and agencies as the
11 Secretary determines to be ap-
12 propriate, including—

13 (AA) the Secretary of
14 Homeland Security;

15 (BB) the Secretary of
16 Labor; and

17 (CC) the Secretary of
18 State; and

19 (ff) such representatives of
20 industry expert organizations and
21 local government entities as the
22 Secretary determines to be ap-
23 propriate.

24 (B) PRIORITIZATION.—For purposes of co-
25 ordinating Federal activities under subpara-

1 graph (A), the Secretaries shall prioritize the
2 conduct of Federal activities that would—

3 (i) demonstrate smart city or commu-
4 nity technologies in repeatable ways that
5 can rapidly be scaled;

6 (ii) encourage public, private, re-
7 gional, national, and international sharing
8 of data and best practices;

9 (iii) encourage private sector innova-
10 tion by promoting industry-driven tech-
11 nology standards, open platforms, tech-
12 nology-neutral requirements, and inter-
13 operability;

14 (iv) promote—

15 (I) a skilled workforce;

16 (II) an open and competitive
17 global market for smart city or com-
18 munity technologies;

19 (III) inclusion of all citizens, in-
20 cluding minority or disadvantaged
21 groups; and

22 (IV) protocols and standards that
23 allow for the measurement and valida-
24 tion of the cost savings and perform-
25 ance improvements associated with

1 the installation and use of smart city
2 or community technologies and prac-
3 tices;

4 (v) foster the growth of the smart city
5 or community technology industry and
6 workforce in the United States;

7 (vi) encourage the adoption of smart
8 city or community technologies by commu-
9 nities;

10 (vii) safeguard cybersecurity, includ-
11 ing by promoting industry practices re-
12 garding cybersecurity; and

13 (viii) safeguard privacy and, in con-
14 sultation with cities, communities, and in-
15 dustry entities, establish parameters and
16 best practices for the full life cycle man-
17 agement of all types of smart city or com-
18 munity data, including collection, storage,
19 ownership, and sharing of data.

20 (C) CONSIDERATIONS.—The Secretaries
21 shall—

22 (i) ensure that the Federal activities
23 described in subparagraph (B) related to
24 safeguarding cybersecurity take into ac-
25 count existing Federal, State, and local

1 frameworks, guidelines, and best practices
2 when considering their application to smart
3 city technologies;

4 (ii) ensure that the Federal activities
5 described in subparagraph (B) take into
6 consideration software quality, especially
7 as that quality impacts reproducibility,
8 maintainability, reliability, and security,
9 especially of high-confidence systems;

10 (iii) conduct privacy impact assess-
11 ments for Federal activities that could neg-
12 atively affect privacy; and

13 (iv) ensure the privacy of individuals
14 through the use of technologies with inher-
15 ent privacy and security considerations.

16 (2) STRATEGY.—

17 (A) IN GENERAL.—The Secretaries, acting
18 through the Council, in consultation with indus-
19 try entities, cities, and communities, shall de-
20 velop a multiyear strategy for—

21 (i) the coordination of activities and
22 funding under paragraph (1)(A);

23 (ii) the development of partnerships
24 with the private sector relating to smart
25 cities or communities; and

1 (iii) the promotion of international co-
2 operation with respect to smart city or
3 community technologies and standards.

4 (B) REQUIREMENT.—The Secretaries shall
5 coordinate with the heads of any applicable
6 Federal agencies to leverage private sector and
7 non-Federal public investment in smart city or
8 community technologies consistent with the
9 strategy developed under subparagraph (A).

10 (3) ASSESSMENT.—

11 (A) IN GENERAL.—Not later than 180
12 days after the date of enactment of this Act,
13 the Secretary of Labor, in consultation with the
14 heads of other applicable Federal agencies, shall
15 coordinate with such private and public organi-
16 zations and units of local government as the
17 Secretary of Labor determines to be appro-
18 priate regarding the preparation of a smart city
19 or community technology workforce needs as-
20 sessment.

21 (B) SUBMISSION.—On completion of the
22 assessment prepared under subparagraph (A),
23 the Secretary of Labor shall submit to the ap-
24 propriate committees of Congress and the
25 Council the completed assessment.

1 (4) COORDINATION OF FUNDS.—In promoting
2 the coordination of Federal funding relating to
3 smart city or community activities under paragraph
4 (1)(A) and in accordance with the strategy developed
5 under paragraph (2)(A), each of the Secretaries
6 shall—

7 (A) track, with respect to the appropriate
8 agency, the expenditures and planned expendi-
9 tures of Federal funds for smart city- or com-
10 munity-related activities, together with lever-
11 aged non-Federal matching funds; and

12 (B) coordinate with the head of any other
13 applicable Federal agency that allocates funds
14 for smart city or community activities—

15 (i) to achieve greater benefits from ac-
16 tivities using Federal funds;

17 (ii) to produce integrated projects re-
18 lating to those activities; and

19 (iii) to leverage complementary invest-
20 ments of other Federal agencies in those
21 activities.

22 (b) SUBMISSION OF INFORMATION AND BIENNIAL
23 REPORT.—During the 6-year period beginning on the date
24 of enactment of this Act—

1 (1) the head of each applicable Federal agency
2 shall submit to the Secretary information for inclu-
3 sion in the report submitted under paragraph (2);
4 and

5 (2) not less frequently than once every 2 years,
6 the Secretary shall submit to the Committees on
7 Commerce, Science, and Transportation and Energy
8 and Natural Resources of the Senate and the Com-
9 mittees on Energy and Commerce and Transpor-
10 tation and Infrastructure of the House of Represent-
11 atives a report, based on the information under
12 paragraph (1), that includes—

13 (A) an update of the status of relevant
14 smart city or community technology develop-
15 ments and applications, including broadband in-
16 frastructure;

17 (B) a description of any related program
18 or activity that is funded by the Federal agency
19 during the period covered by the report;

20 (C) the budget of the agency for sup-
21 porting smart city or community activities, as
22 described in subsection (a)(4)(A);

23 (D) any non-Federal cost-share contrib-
24 uted for activities for which Federal assistance
25 is provided under this section;

1 (E) a description of the applicable strategy
2 under subsection (a)(2)(A), including a descrip-
3 tion of how the relevant programs are pro-
4 gressing under that strategy;

5 (F) a description of outreach activities con-
6 ducted under section 102(d), including the
7 amount and type of assistance required by cities
8 and communities to overcome barriers to imple-
9 menting smart city or community technologies,
10 and any Federal actions that are needed to
11 meet those needs;

12 (G) a description of projects funded under
13 section 201, including a description of—

14 (i) project outcomes and performance;

15 and

16 (ii) the use of leveraged non-Federal
17 funds; and

18 (H) such other information as the Sec-
19 retary determines to be necessary.

20 **SEC. 102. SMART CITY AND COMMUNITY RESOURCE GUIDE.**

21 (a) PUBLICATION.—

22 (1) IN GENERAL.—The Secretaries, in coordina-
23 tion with the heads of any other applicable Federal
24 agencies, shall create, publish, and maintain, for a
25 period of at least 6 years beginning on the date that

1 is 1 year after the date of enactment of this Act, a
2 resource guide designed to assist States and United
3 States communities and cities in developing and im-
4 plementing smart city or community programs.

5 (2) INFORMATION INCLUDED.—The Secretaries,
6 in coordination with cities, communities, and indus-
7 try entities, shall determine which information shall
8 be included in the guide under paragraph (1).

9 (b) REQUIREMENTS.—The guide published under
10 subsection (a)—

11 (1) shall be maintained electronically on a
12 website;

13 (2) shall be provided as an electronic reference
14 guide available to the public free of charge; and

15 (3) may include—

16 (A) a compilation of existing related pro-
17 grams of the Federal Government available to
18 communities, including technical assistance,
19 education, training, research and development,
20 analysis, and funding;

21 (B) available examples of local govern-
22 ments engaging private sector entities in order
23 to implement smart city or community solu-
24 tions, including public-private partnership mod-
25 els, such as the use of energy savings perform-

1 ance contracts and utility energy service con-
2 tracts or other innovative models, that could be
3 used to leverage private sector funding to in-
4 crease energy productivity and reduce water,
5 transportation, and other costs to cities and
6 communities, including the results of the study
7 under section 204;

8 (C) available examples of proven methods
9 for local governments and utilities to facilitate
10 integration of smart technologies with new and
11 existing infrastructure and systems;

12 (D) best practices and lessons learned
13 from technology demonstrations, including re-
14 turn on investment and performance informa-
15 tion to help cities decide how to initiate integra-
16 tion of smart technologies;

17 (E) Federal, State, and local best practices
18 for safeguarding cybersecurity and ensuring ap-
19 propriate data management and data privacy;

20 (F) technical specifications for wireless or
21 wired broadband infrastructure to support
22 smart city technologies; and

23 (G) such other topics as are requested by
24 industry entities or local governments or deter-
25 mined to be necessary by the Secretaries.

1 (c) EXISTING GUIDES.—In creating, publishing, and
2 maintaining the guide under subsection (a), the Secre-
3 taries shall consider Federal, State, and local guides pub-
4 lished before, on, or after the date of enactment of this
5 Act relating to smart city or community goals, activities,
6 and best practices—

7 (1) to prevent duplication of efforts by the Fed-
8 eral Government; and

9 (2) to leverage existing complementary efforts.

10 (d) OUTREACH.—The Secretaries, in coordination
11 with the heads of any applicable Federal agencies and in
12 consultation with applicable private sector entities, shall
13 conduct outreach to States, cities, and communities—

14 (1) to provide interested States and cities with
15 the guide published under subsection (a);

16 (2) to promote the consideration of smart city
17 or community technologies and encourage States
18 and local governments to contribute smart city or
19 community program and activity data to the guide
20 published under subsection (a);

21 (3) to identify—

22 (A) barriers to smart city or community
23 technology adoption;

1 (B) any research, development, and assist-
 2 ance that is needed, including in Tribal, rural,
 3 and underserved communities; and

4 (C) local government programs that could
 5 be included in the guide under subsection (a);

6 (4) to respond to requests for assistance, ad-
 7 vice, or consultation from cities; and

8 (5) for other purposes, as identified by the Sec-
 9 retaries.

10 **TITLE II—PROVIDING ASSIST-**
 11 **ANCE TO CITIES AND COMMU-**
 12 **NITIES**

13 **SEC. 201. TECHNOLOGY DEMONSTRATION GRANT PRO-**
 14 **GRAM.**

15 (a) IN GENERAL.—The Secretary shall establish a
 16 smart city or community regional demonstration grant
 17 program under which the Secretary shall conduct dem-
 18 onstration projects focused on advanced smart city or
 19 community technologies and systems in a variety of com-
 20 munities, including small- and medium-sized cities and
 21 rural and Tribal communities.

22 (b) GOALS.—The goals of the program established
 23 under subsection (a) are—

24 (1) to demonstrate—

1 (A) potential benefits of concentrated in-
2 vestments in smart city or community tech-
3 nologies that are repeatable and scalable across
4 cities of different sizes; and

5 (B) the efficiency, reliability, and resilience
6 of civic infrastructure and services;

7 (2) to facilitate the adoption of advanced smart
8 city or community technologies and collaboration be-
9 tween small- and medium- to large-sized cities; and

10 (3) to demonstrate protocols and standards that
11 allow for the measurement and validation of the cost
12 savings and performance improvements associated
13 with the installation and use of smart city or com-
14 munity technologies and practices.

15 (c) DEMONSTRATION PROJECTS.—

16 (1) ELIGIBILITY.—Subject to paragraph (2), a
17 unit of local government shall be eligible to receive
18 a grant for a demonstration project under this sec-
19 tion.

20 (2) APPLICATION; COOPERATION.—To qualify
21 for a demonstration project under this section, a
22 unit of local government shall—

23 (A) submit to the Secretary an application
24 for a grant for a demonstration project at such

1 time and containing such information as the
2 Secretary may require; and

3 (B) agree to follow applicable best prac-
4 tices identified by the Secretaries, in consulta-
5 tion with industry entities and institutions of
6 higher education, to evaluate the effectiveness
7 of the implemented smart city or community
8 technologies to ensure that—

9 (i) technologies and interoperability
10 can be assessed;

11 (ii) best practices can be shared; and

12 (iii) data can be shared in a public,
13 interoperable, and transparent format.

14 (3) FEDERAL SHARE OF COST OF TECHNOLOGY
15 INVESTMENTS.—The Secretary—

16 (A) subject to subparagraph (B), shall pro-
17 vide to a unit of local government selected
18 under this section for the conduct of a dem-
19 onstration project a grant in an amount equal
20 to not more than 50 percent of the total cost
21 of technology investments to incorporate and
22 assess qualifying smart city or community tech-
23 nologies in the applicable jurisdiction; but

1 (B) may waive the cost-share requirement
2 of subparagraph (A) as the Secretary deter-
3 mines to be appropriate.

4 (d) REQUIREMENT.—In conducting demonstration
5 projects under this section, the Secretary shall—

6 (1) develop competitive, technology-neutral re-
7 quirements;

8 (2) seek to leverage ongoing or existing civic in-
9 frastructure investments; and

10 (3) take into consideration the non-Federal cost
11 share as a competitive criterion in applicant selec-
12 tion in order to leverage non-Federal investment.

13 (e) PUBLIC AVAILABILITY OF DATA AND RE-
14 PORTS.—The Secretary shall ensure that reports, public
15 data sets, schematics, diagrams, and other works created
16 using a grant provided under this section are—

17 (1) available on a royalty-free, non-exclusive
18 basis; and

19 (2) open to the public to reproduce, publish, or
20 otherwise use, without cost.

21 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
22 authorized to be appropriated to carry out subsection (c)
23 \$100,000,000 for each of fiscal years 2018 through 2022.

1 **SEC. 202. CYBERSECURITY WORKING GROUP.**

2 (a) SENSE OF CONGRESS.—It is the sense of Con-
3 gress that—

4 (1) the work conducted by the Internet Policy
5 Task Force and the Digital Economy Leadership
6 Team of the Department of Commerce to foster an
7 enabling environment for Internet of Things tech-
8 nology to grow and thrive, allow the private sector
9 to lead, and promote technology-neutral standards
10 and consensus-based multistakeholder approaches to
11 policymaking at local, Tribal, State, Federal, and
12 international levels on issues ranging from the secu-
13 rity to the competitiveness of the United States is
14 valuable and should be continued; and

15 (2) the work conducted by the Department of
16 Commerce and the National Telecommunications
17 and Information Administration to create resources
18 for communities seeking to adopt smart cities or
19 communities technology is valuable and should be
20 continued.

21 (b) ESTABLISHMENT.—

22 (1) IN GENERAL.—The Secretary, in consulta-
23 tion with the Council, shall convene a multistake-
24 holder working group, to be known as the “Cyberse-
25 curity Working Group”, to develop tools for commu-

1 nities to use to evaluate the cybersecurity of smart
2 city or community technologies.

3 (2) MEMBERSHIP.—

4 (A) IN GENERAL.—In appointing members
5 to the Working Group, the Secretary shall con-
6 sider appointing—

7 (i) representatives of consumer
8 groups;

9 (ii) representatives of small units of
10 local government, as determined by the
11 Secretary;

12 (iii) representatives of large units of
13 local government, as determined by the
14 Secretary;

15 (iv) manufacturers of smart city or
16 community devices, equipment, and soft-
17 ware;

18 (v) individuals with expertise in com-
19 munications networks;

20 (vi) Federal, State, and local law en-
21 forcement officials;

22 (vii) individuals with other expertise
23 necessary to carry out the duties of the
24 Working Group; and

1 (viii) such representatives of the
2 Council as the Secretary determines to be
3 appropriate.

4 (B) REPRESENTATION.—In appointing
5 members to the Working Group, the Secretary
6 shall ensure that the Working Group includes a
7 multidisciplinary cross section of smart city or
8 community stakeholders.

9 (3) DUTIES.—The Working Group shall—

10 (A) leverage and build on previous activi-
11 ties carried out by the Department of Com-
12 merce relating to Internet of Things technology;

13 (B) develop tools for communities to evalu-
14 ate the cybersecurity of smart city or commu-
15 nity technology being considered by the commu-
16 nities for adoption in those communities;

17 (C) develop tools for communities to pro-
18 tect against cybersecurity threats relevant to
19 the technology the community has chosen to
20 adopt;

21 (D)(i) assess—

22 (I) whether Internet of Things cyber-
23 security standards should exist; and

1 (II) whether the standards described
2 in subclause (I) should be voluntary or
3 mandatory; and

4 (ii) identify which entity is appropriate to
5 devise the standards described in clause (i)(I);
6 and

7 (E) submit to the Council a report that de-
8 scribes the findings of the Working Group.

9 **SEC. 203. TECHHIRE WORKFORCE TRAINING AND DEVEL-**
10 **OPMENT PROGRAM.**

11 (a) IN GENERAL.—Not later than 18 months after
12 the date of enactment of this Act, based on findings from
13 the needs assessment conducted under section 101(a)(3),
14 the Secretary of Labor, in consultation with the Secretary,
15 shall establish a pilot program, to be known as the
16 “TechHire Workforce Training and Development Pilot
17 Program”, under which the Secretary of Labor, during the
18 5-year period beginning on the date of enactment of this
19 Act, shall provide to eligible entities, on a competitive
20 basis, grants for technology-based job training and edu-
21 cation programs that provide industry-recognized creden-
22 tials.

23 (b) REQUIREMENTS.—A job training and education
24 program that is awarded a grant under this section
25 shall—

1 (1) provide technology-based training across
2 two or more sectors;

3 (2) focus on smart city or community tech-
4 nologies, systems, and infrastructure across all sec-
5 tors of the economy;

6 (3) address privacy and cybersecurity consider-
7 ations; and

8 (4) address smart city or community workforce
9 needs identified by the Secretary of Labor, after
10 consultation with other applicable Federal agencies.

11 (c) ELIGIBLE ENTITIES.—To be eligible to receive a
12 grant under this section, an entity shall be a public organi-
13 zation or an organization described in section 501(c) of
14 the Internal Revenue Code of 1986 and exempt from tax-
15 ation under section 501(a) of that Code that—

16 (1) includes an advisory board, which may be—

17 (A)(i) a local workforce development board;

18 (ii) a State workforce development board;

19 or

20 (iii) an appropriate subgroup of a local
21 workforce development board or a State work-
22 force development board; or

23 (B) a board of proportional participation,
24 as determined by the Secretary of Labor, of rel-
25 evant organizations, including—

- 1 (i) relevant industry organizations, in-
2 cluding public and private employers;
3 (ii) labor organizations;
4 (iii) one or more units of local govern-
5 ment that are actively pursuing smart city
6 or community programs; and
7 (iv) postsecondary education organiza-
8 tions;
- 9 (2) demonstrates experience in implementing
10 and operating job training and education programs;
- 11 (3) demonstrates the ability to recruit and sup-
12 port individuals who plan to work in a relevant sec-
13 tor on the successful completion of relevant job
14 training and education programs;
- 15 (4)(A) provides students who complete the
16 training and education program with an industry-
17 recognized credential; or
- 18 (B) uses a curriculum that has received exten-
19 sive feedback from employers; and
- 20 (5) demonstrates successful outcomes con-
21 necting graduates of job training and education pro-
22 grams to quality jobs relevant to the job training
23 and education programs.
- 24 (d) APPLICATIONS.—An eligible entity seeking a
25 grant under this section shall submit to the Secretary of

1 Labor an application at such time, in such manner, and
2 containing such information as the Secretary of Labor
3 may require.

4 (e) PRIORITY.—In selecting eligible entities to receive
5 grants under this section, the Secretary of Labor shall
6 prioritize applicants that—

7 (1)(A) are a local workforce development board
8 or State workforce development board; or

9 (B) demonstrate a strong partnership with a
10 local workforce development board or State work-
11 force development board;

12 (2) house the job training and education pro-
13 gram in—

14 (A) a community college or institution of
15 higher education that includes basic science,
16 technology, and math education in the cur-
17 riculum of the community college or institution
18 of higher education; or

19 (B) an apprenticeship program registered
20 with the Department of Labor or a State;

21 (3) work with the Secretary of Defense or vet-
22 erans organizations to transition members of the
23 Armed Forces and veterans to careers in a relevant
24 sector;

1 (4) include in the application an entity that re-
2 ceives State funding or is operated by a State agen-
3 cy;

4 (5) include an apprenticeship program reg-
5 istered with the Department of Labor or a State as
6 part of the job training and education program;

7 (6) provide support services and career coach-
8 ing;

9 (7) provide entry-level technology workforce
10 training aimed at matching workers with well-paying
11 jobs; or

12 (8) propose to serve—

13 (A) young adults between the ages of 16
14 and 24; or

15 (B) individuals with barriers to employ-
16 ment (as defined in section 3 of the Workforce
17 Innovation and Opportunity Act (29 U.S.C.
18 3102)).

19 (f) **ADDITIONAL CONSIDERATION.**—In making grants
20 under this section, the Secretary of Labor shall consider
21 regional diversity.

22 (g) **LIMITATION ON APPLICATIONS.**—An eligible enti-
23 ty may not submit, either individually or as part of a joint
24 application, more than 1 application for a grant under this
25 section during any 1 fiscal year.

1 (h) LIMITATIONS ON AMOUNT OF GRANT.—The
2 amount of a single grant provided under this section for
3 any 1 year shall not exceed \$5,000,000.

4 (i) NON-FEDERAL SHARE.—The non-Federal share
5 of the cost of a job training and education program carried
6 out using a grant under this section shall be not less than
7 25 percent of the total cost.

8 (j) REDUCTION OF DUPLICATION.—Before submit-
9 ting an application for a grant under this section, each
10 applicant shall—

11 (1) consult with the heads of appropriate Fed-
12 eral agencies; and

13 (2) coordinate the proposed activities of the ap-
14 plicant with existing State and local programs.

15 (k) TECHNICAL ASSISTANCE.—The Secretary of
16 Labor, in consultation with the Secretary, may provide
17 technical assistance to eligible entities under subsection
18 (c) to leverage the existing job training and education pro-
19 grams of the Department of Labor and other relevant pro-
20 grams at appropriate Federal agencies.

21 (l) REPORT.—Not less frequently than once every 2
22 years, the Secretary of Labor shall submit to Congress,
23 and make publicly available on the website of the Depart-
24 ment of Labor, a report on the program established under
25 this section, including a description of—

1 (1) any entity that receives a grant under this
2 section;

3 (2) any activity carried out using the grants
4 under this section;

5 (3) best practices used to leverage the invest-
6 ment of the Federal Government under this section;
7 and

8 (4) an assessment of the results achieved by the
9 program established under this section, including the
10 rate of employment for participants after completing
11 a job training and education program carried out
12 using a grant under this section.

13 (m) AUTHORIZATION OF APPROPRIATIONS.—There is
14 authorized to be appropriated to carry out this section
15 \$100,000,000 for each of fiscal years 2018 through 2022.

16 **SEC. 204. GAO STUDY ON INNOVATIVE FINANCING.**

17 Not later than 1 year after the date of enactment
18 of this Act, the Comptroller General of the United States
19 shall conduct a study to identify—

20 (1) financial and procurement mechanisms cur-
21 rently available to public and private entities to fund
22 smart city or community activities and associated
23 demonstration projects, including “pay for perform-
24 ance” financing that could deliver measurable and

1 verifiable market and non-market values to smart
2 cities or communities;

3 (2) new, innovative financial and procurement
4 mechanisms under development or used experi-
5 mentally that may be available, in the near term, to
6 public and private entities to fund smart city or
7 community activities and associated demonstration
8 projects;

9 (3) barriers to creative financing solutions for
10 those activities and projects, including procurement
11 barriers faced by State and local governments; and

12 (4) ways to leverage private sector investments
13 in smart cities and communities.

14 **TITLE III—IMPROVING PER-**
15 **FORMANCE AND INTEROPER-**
16 **ABILITY**

17 **SEC. 301. STANDARDS AND INTEROPERABILITY FRAME-**
18 **WORK.**

19 (a) PARTICIPATION.—To strengthen the public-pri-
20 vate partnership approach to smart city- or community-
21 related standards development and interoperability, the
22 Secretary, acting through the Director of the National In-
23 stitute of Standards and Technology, shall strongly en-
24 courage and support participation by Federal Government
25 experts in private sector-led standards-related activities

1 that convene smart city or community stakeholders, in-
2 cluding representatives of applicable Federal agencies.

3 (b) ACTIVITIES.—To promote innovation and eco-
4 nomic competitiveness and to achieve interoperability of
5 smart city or community devices and systems, while
6 strengthening the United States approach to private sec-
7 tor-led standardization activities and the participation of
8 Federal representatives under subsection (a), the Sec-
9 retary, in consultation with private and public sector
10 stakeholders, shall—

11 (1) survey and review domestic and inter-
12 national smart city or community performance
13 standards, existing architectures, applications, and
14 deployments, and interoperability standards;

15 (2) make consensus-based recommendations—

16 (A) to identify gaps in the smart city or
17 community performance standards and inter-
18 operability standards under paragraph (1);

19 (B) to harmonize existing standards and
20 deployment efforts and enable greater inter-
21 operability across smart city or community
22 technologies;

23 (C) to coordinate domestic and inter-
24 national performance standards and interoper-
25 ability standards to promote uniform perform-

1 ance standards and interoperability standards
2 worldwide, including with respect to the need
3 for testing and demonstration; and

4 (D) for guidelines to enable interoperability
5 in the collection, storage, ownership, and shar-
6 ing of data;

7 (3) based on the recommendations under para-
8 graph (2), develop a consensus-based framework
9 that includes protocols and model standards for the
10 management and exchange of information, including
11 existing guidelines, best practices, and industry con-
12 sensus standards;

13 (4) ensure that cybersecurity and privacy are
14 core elements of the recommended performance
15 standards and interoperability standards; and

16 (5) lead international coordination efforts to de-
17 velop industry-led, technology-neutral, voluntary,
18 consensus-based global smart city or community per-
19 formance standards and interoperability standards.

1 **TITLE IV—INTERNATIONAL CO-**
2 **OPERATION AND BEST PRAC-**
3 **TICES**

4 **SEC. 401. DEVELOPMENT OF GLOBAL SMART CITY OR COM-**
5 **MUNITY BEST PRACTICES.**

6 (a) IN GENERAL.—The Secretaries may carry out ac-
7 tivities—

8 (1) to enable cities and communities in the
9 United States and other countries to work together
10 toward shared smart city- or community-related
11 goals;

12 (2) to promote smart city or community solu-
13 tions that provide measurable benefits to local gov-
14 ernments and residents;

15 (3) to enable an open, global market place for
16 smart city or community technologies based on vol-
17 untary, consensus-based, and technology-neutral
18 standards; and

19 (4) to connect innovators from industry and
20 academia to local governments to catalyze the emer-
21 gence of open and advanced technologies that—

22 (A) meet community needs; and

23 (B) advance innovation and open competi-
24 tion.

1 (b) ELIGIBLE ACTIVITIES.—The activities referred to
2 in subsection (a) may include grants, contracts, chal-
3 lenges, prize competitions, public-private partnerships,
4 and other innovative mechanisms.

5 (c) AUTHORIZATION OF APPROPRIATIONS.—

6 (1) IN GENERAL.—There is authorized to be
7 appropriated to the Secretaries to carry out this sec-
8 tion \$20,000,000 for each of fiscal years 2018
9 through 2022.

10 (2) LIMITATION ON USE OF FUNDS.—Funds
11 made available under paragraph (1) may be not used
12 to provide assistance to—

13 (A) a foreign country; or

14 (B) a foreign company (excluding any
15 United States subsidiary of a foreign holding
16 company).

17 **SEC. 402. TRADE PROGRAM.**

18 The Secretary, in consultation with the Secretary of
19 State, such other members of the Council as the Secretary
20 determines to be appropriate, and private stakeholders,
21 shall establish a strategic international smart cities and
22 communities trade program, which shall include trade mis-
23 sions—

24 (1) to promote the export of United States
25 smart cities or communities technologies;

1 (2) to stimulate job growth in the United
2 States;

3 (3) to identify potential partners and strategies
4 for United States companies in target foreign mar-
5 ket sectors;

6 (4) to organize events with local governments,
7 businesses, associations, academia, and other stake-
8 holders to promote smart city or community partner-
9 ships;

10 (5) to assist in the development of competitive
11 strategies and foreign market access for United
12 States smart city or community technology business
13 interests;

14 (6) to assist in developing appropriate United
15 States policy regarding United States business and
16 international smart cities or communities business
17 interests;

18 (7) to assist in achieving United Nations
19 Framework Convention on Climate Change commit-
20 ments;

21 (8) to assist in lowering the cost to consumers
22 of smart cities or communities technologies;

23 (9) to leverage expertise in infrastructure to de-
24 liver solutions that can help make communities more
25 efficient, livable, and sustainable; and

1 (10) to work with the United States Agency for
2 International Development, the Overseas Private In-
3 vestment Corporation, and the Export-Import Bank
4 of the United States to identify opportunities to fi-
5 nance international investment in United States
6 smart cities or communities technology companies.

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