

104TH CONGRESS
1ST SESSION

H. R. 1844

To contribute to the competitiveness of the United States by enhancing the manufacturing technology programs of the Department of Commerce.

IN THE HOUSE OF REPRESENTATIVES

JUNE 14, 1995

Mr. OLVER introduced the following bill; which was referred to the Committee on Science

A BILL

To contribute to the competitiveness of the United States by enhancing the manufacturing technology programs of the Department of Commerce.

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.**

4 This Act may be cited as the “Manufacturing Tech-
5 nology and Extension Act of 1995”.

6 **SEC. 2. FINDINGS, PURPOSE, AND STATEMENT OF POLICY.**

7 The Stevenson-Wydler Technology Innovation Act of
8 1980 (15 U.S.C. 3701 et seq.) is amended by adding at
9 the end the following new title:

1 **“TITLE III—MANUFACTURING**
2 **TECHNOLOGY**

3 **“SEC. 301. FINDINGS, PURPOSE, AND STATEMENT OF POL-**
4 **ICY.**

5 “(a) FINDINGS.—Congress finds and declares the fol-
6 lowing:

7 “(1) United States manufacturers, especially
8 small businesses, require the adoption and imple-
9 mentation of both modern and advanced manufac-
10 turing and process technologies to meet the chal-
11 lenge of foreign competition.

12 “(2) The development and application of mod-
13 ern and advanced manufacturing technologies are
14 vital to the sustainable economic growth, standard of
15 living, competitiveness in world markets, and na-
16 tional security and welfare of the United States.

17 “(3) New developments in flexible, computer-in-
18 tegrated manufacturing, electronic manufacturing
19 communications networks, and other new tech-
20 nologies make possible dramatic improvements
21 across all industrial sectors in productivity, quality,
22 and the speed with which United States manufactur-
23 ers can respond to changing market opportunities.

24 “(4) The application of advances in computer
25 science and technology to manufacturing is also vital

1 to the Nation’s prosperity, national and economic se-
2 curity, industrial production, engineering, and sci-
3 entific advancement.

4 “(5) The Department of Commerce’s Tech-
5 nology Administration, along with other Federal
6 agencies, can continue to play an important role in
7 assisting United States companies to develop, test,
8 and adopt modern and advanced manufacturing
9 technologies and in establishing high-performance
10 computing technology testbeds to develop, refine,
11 test, and transfer advanced manufacturing and
12 networking technologies and associated applications.

13 “(b) PURPOSE.—It is the purpose of this title to con-
14 tribute to the competitiveness of the United States by en-
15 hancing the Department of Commerce’s technology pro-
16 grams to—

17 “(1) provide United States manufacturers, es-
18 pecially small businesses, with ready access to high
19 quality advice and assistance in the development,
20 adoption, and improvement of modern manufactur-
21 ing processes and technology, and in solving their
22 specific technology-based problems; and

23 “(2) encourage, facilitate, and support the de-
24 velopment and adoption of advanced manufacturing

1 principles and technologies by United States manu-
2 facturers.

3 “(c) STATEMENT OF POLICY.—Congress declares
4 that it is the policy of the United States that—

5 “(1) Federal agencies, particularly the Depart-
6 ment of Commerce, shall work with United States
7 manufacturers, labor, and the States to ensure that
8 the United States is second to no other nation in the
9 development, adoption, and use of modern and ad-
10 vanced manufacturing technology;

11 “(2) the Department of Commerce shall work
12 with all the major Federal research and development
13 agencies to encourage the development and adoption,
14 by United States manufacturers, of advanced manu-
15 facturing technologies, and shall work closely with
16 United States manufacturers and labor, and with
17 the Nation’s universities, to develop and test those
18 technologies; and

19 “(3) the Department of Commerce shall place a
20 high priority on the establishment and growth of a
21 National Technology Outreach Program to promote
22 and facilitate the development and use by United
23 States manufacturers of modern and advanced man-
24 ufacturing systems and applications for manufactur-
25 ing.

1 “(d) CONSTRUCTION.—Nothing in this title shall be
2 construed as modifying the duties and responsibilities of
3 the Department of Energy with regard to its technology
4 resources and expertise in matters under its jurisdiction.”.

5 **SEC. 3. ROLE OF THE DEPARTMENT OF COMMERCE.**

6 Title III of the Stevenson-Wydler Technology Innova-
7 tion Act of 1980, as added by section 2 of this Act, is
8 further amended by adding at the end the following new
9 section:

10 **“SEC. 302. ROLE OF THE DEPARTMENT OF COMMERCE.**

11 “(a) DEPARTMENT OF COMMERCE.—Consistent with
12 the purposes and policies of section 301, the Department
13 of Commerce shall have primary responsibility in the Fed-
14 eral Government in working with United States manufac-
15 turers and labor and the States to develop advanced man-
16 ufacturing technologies and to promote and assist the
17 adoption and use of modern and advanced manufacturing
18 technologies, practices, and management techniques
19 throughout the United States. In carrying out this title,
20 the Secretary, acting, as appropriate, through the Under
21 Secretary and the Director, shall—

22 “(1) consult and cooperate with other Federal
23 agencies, including the Department of Defense, the
24 Department of Energy, and the National Aero-
25 nautics and Space Administration to ensure consist-

1 ent and, where possible, coordinated efforts to pro-
2 mote the development and adoption of modern and
3 advanced manufacturing technologies;

4 “(2) assist the Office of Science and Tech-
5 nology Policy in its efforts to coordinate the manu-
6 facturing technology activities of the various Federal
7 agencies; and

8 “(3) work with representatives of Federal,
9 State, and local agencies, manufacturing extension
10 programs, private industry, industry groups, worker
11 organizations, and academia to encourage and facili-
12 tate the use of both advanced manufacturing tech-
13 nologies, including those developed by the Advanced
14 Manufacturing Technology Development Program
15 established under section 304 of this Act, and mod-
16 ern manufacturing technologies and practices to
17 United States manufacturers.

18 The Secretary shall annually report to Congress on actions
19 taken under this subsection.

20 “(b) OTHER FEDERAL AGENCIES.—To the extent
21 permitted by other law, other Federal agencies shall co-
22 operate with the Secretary in carrying out this title.”.

23 **SEC. 4. NATIONAL TECHNOLOGY OUTREACH PROGRAM.**

24 Title III of the Stevenson-Wydler Technology Innova-
25 tion Act of 1980, as added by sections 2 and 3 of this

1 Act, is further amended by adding at the end the following
2 new section:

3 **“SEC. 303. NATIONAL TECHNOLOGY OUTREACH PROGRAM.**

4 “(a) ESTABLISHMENT AND PURPOSE.—There is
5 hereby established a National Technology Outreach Pro-
6 gram (in this section referred to as the ‘Outreach Pro-
7 gram’), the purpose of which shall be to—

8 “(1) interconnect, programmatically and elec-
9 tronically, the Nation’s technology and manufactur-
10 ing extension centers, programs, and activities;

11 “(2) improve the competitiveness of United
12 States manufacturers and create jobs located in the
13 United States; and

14 “(3) assist United States manufacturers, espe-
15 cially small businesses, to expand and accelerate the
16 use of cost-effective modern manufacturing tech-
17 nologies and practices and to develop and adopt ad-
18 vanced manufacturing technologies. The Secretary,
19 acting through the Under Secretary and the Direc-
20 tor, shall implement and coordinate the Outreach
21 Program in accordance with an initial plan and a 5-
22 year plan for the Outreach Program, to be submit-
23 ted to the Congress under subsection (g).

24 “(b) PROGRAM COMPONENTS.—The Outreach Pro-
25 gram shall constitute a partnership between the Depart-

1 ment of Commerce, the States, the private sector, and,
2 as appropriate, shall include other Federal agencies to
3 provide a national system of manufacturing and tech-
4 nology extension centers and technical services to United
5 States manufacturers, particularly small businesses. The
6 Outreach Program shall include—

7 “(1) Manufacturing Outreach Centers estab-
8 lished under subsection (c);

9 “(2) Regional Centers for the Transfer of Man-
10 ufacturing Technology established under section 25
11 of the National Institute of Standards and Tech-
12 nology Act (15 U.S.C. 278k);

13 “(3) the State Technology Extension Program
14 established under section 26 of the National Insti-
15 tute of Standards and Technology Act (15 U.S.C.
16 278l);

17 “(4) the Outreach Program Information Net-
18 work and the Clearinghouse established under sub-
19 sections (d) and (e) of this section, respectively; and

20 “(5) other technology and manufacturing exten-
21 sion centers and activities supported by Federal,
22 State, or local agencies which could contribute to the
23 goals of this title and that the Secretary considers
24 appropriate for inclusion in the Outreach Program.

1 “(c) MANUFACTURING OUTREACH CENTERS.—(1)
2 Eligible government and private sector organizations that
3 are engaged in technology or manufacturing extension ac-
4 tivities may apply to the Secretary for designation as Man-
5 ufacturing Outreach Centers, in such form and manner
6 as the Secretary may prescribe. Eligible organizations in-
7 clude Federal, State, and local government agencies, ex-
8 tension programs, universities, and laboratories; small
9 business development centers; and professional societies,
10 worker organizations, industrial organizations, nonprofit
11 organizations, community development organizations,
12 community colleges, and technical schools and colleges.

13 “(2) The Secretary shall establish standards, consist-
14 ent with the requirements of subsection (f), for designa-
15 tion of existing technology or manufacturing extension
16 programs and for qualification of start-up programs as
17 Manufacturing Outreach Centers.

18 “(3) The Secretary may, through a competitive proc-
19 ess, make grants, subject to the availability of appropria-
20 tions, to Manufacturing Outreach Centers designated in
21 accordance with the standards established under para-
22 graph (2), to enable them to fulfill the purposes and per-
23 form the activities of the Outreach Program. If a State
24 plan for technology extension exists in a State where an
25 applicant for a grant under this paragraph is operating

1 or plans to operate, the proposer shall demonstrate in its
2 application that its proposal is compatible with such State
3 plan. The purpose of such grants is to upgrade the overall
4 quality of the Outreach Program and to contribute to the
5 goal of ready availability of the services and information
6 provided through the Outreach Program, including infor-
7 mation on modern and advanced manufacturing tech-
8 nology, to all interested United States manufacturers.
9 Such grants shall be awarded to increase the capabilities
10 and capacity of Manufacturing Outreach Centers. Manu-
11 facturing Outreach Centers may not concurrently receive
12 financial assistance under section 25 of the National Insti-
13 tute of Standards and Technology Act and grants under
14 this paragraph. Grants may be awarded under this para-
15 graph for an initial period not to exceed 3 years and may
16 be renewed for one additional period, not to exceed 2
17 years. Such grants may not at any time exceed 50 percent
18 of the operating costs and in-kind contributions of the
19 grant recipient.

20 “(4) In selecting applicants to participate in the Out-
21 reach Program and in making grants under paragraph
22 (3), the Secretary shall solicit and consider evaluations of
23 the applicant’s performance record and current capabili-
24 ties, and the potential usefulness of the applicant’s pro-

1 posal, from United States manufacturers that the Sec-
2 retary considers qualified to make such evaluations.

3 “(d) OUTREACH PROGRAM INFORMATION NET-
4 WORK.—(1) The Department of Commerce shall provide
5 for an instantaneous, interactive electronic communica-
6 tions network (in this section referred to as the ‘outreach
7 network’) to serve the Outreach Program, to facilitate ef-
8 fective and efficient interaction within it, and to permit
9 the collection and dissemination in electronic form, in a
10 timely and accurate manner, of information described in
11 subsection (e). The outreach network shall, wherever prac-
12 ticable, make use of existing public and private computer
13 networks, data bases, and electronic bulletin boards. The
14 design, configuration, acquisition plan, and operating poli-
15 cies, including user fees and appropriate electronic access
16 for public and private information suppliers and users, of
17 the outreach network shall be included in the 5-year plan
18 prepared under subsection (g)(2) and shall address—

19 “(A) effective mechanisms for providing operat-
20 ing funds for the maintenance and use of the out-
21 reach network established under this paragraph, in-
22 cluding user fees, industry support, and continued
23 Federal investment;

1 “(B) the future operation and evolution of the
2 outreach network, including its relationship with
3 other public or private information services;

4 “(C) how to protect the copyrights of material
5 distributed over the outreach network; and

6 “(D) appropriate policies—

7 “(i) to ensure the security of proprietary
8 information that might be available on the out-
9 reach network and to protect the privacy of
10 users of the outreach network; and

11 “(ii) to facilitate and limit access to the
12 outreach network and its information to mem-
13 ber organizations of the Outreach Program and
14 to United States companies, State and local
15 governments, United States universities and
16 colleges, and United States nonprofit organiza-
17 tions that the Secretary deems appropriate.

18 “(2) Except as provided in this section, the outreach
19 network established under paragraph (1) shall be designed
20 and configured in a manner that will enable interoper-
21 ability with networks and technologies developed under the
22 National High-Performance Computing Program de-
23 scribed in section 101 of the High-Performance Comput-
24 ing Act of 1991 (15 U.S.C. 5511). The Secretary shall
25 also, as appropriate, coordinate activities under this sub-

1 section with the relevant activities of other Federal agen-
2 cies, particularly the agile manufacturing/enterprise inte-
3 gration activities of the Department of Defense.

4 “(e) CLEARINGHOUSE.—(1) The Secretary shall de-
5 velop a clearinghouse system, using existing public and
6 private sector information providers and carriers where
7 appropriate, to—

8 “(A) identify expertise and acquire information,
9 appropriate to the purpose of the Outreach Program
10 stated in subsection (a), from all appropriate Fed-
11 eral sources, and where appropriate from other
12 sources, providing assistance where necessary in
13 making such information electronically available
14 through and compatible with the outreach network;

15 “(B) ensure ready access, through the outreach
16 network, by United States companies, Federal agen-
17 cies, State and local governments, United States
18 universities and colleges, United States nonprofit or-
19 ganizations that the Secretary deems appropriate,
20 and member organizations of the Outreach Program,
21 to the most recent relevant available information and
22 expertise;

23 “(C) ensure that common standards of inter-
24 connection are utilized by the outreach network and

1 the clearinghouse to allow maximum interoperability
2 and usership; and

3 “(D) to the extent practicable, inform United
4 States manufacturers of the availability of such in-
5 formation.

6 “(2) The clearinghouse shall include information
7 available electronically on—

8 “(A) activities of Manufacturing Outreach Cen-
9 ters, Regional Centers for the Transfer of Manufac-
10 turing Technology, the State Technology Extension
11 Program, and the users of the outreach network;

12 “(B) domestic and international standards and
13 other export promotion information, including con-
14 formity assessment requirements and procedures;

15 “(C) the Malcolm Baldrige Quality program,
16 and quality principles and standards;

17 “(D) manufacturing processes minimizing waste
18 and negative environmental impact;

19 “(E) federally funded technology development
20 and transfer programs;

21 “(F) how to access data bases and services; and

22 “(G) skills training, particularly the implemen-
23 tation and use of modern and advanced manufactur-
24 ing techniques.

1 “(3) The Secretary, acting through the Under Sec-
2 retary, may convene a national conference to develop rec-
3 ommendations for common standards for interconnection
4 and for improved dissemination to users of the clearing-
5 house of information on domestic and international tech-
6 nical regulations and standards, and on conformity assess-
7 ment procedures, including draft standards and regula-
8 tions. Invited participants are to include a broad cross sec-
9 tion of the standards, accreditation, and user commu-
10 nities.

11 “(f) ADDITIONAL REQUIREMENTS.—In carrying out
12 this section, the Secretary shall satisfy the following re-
13 quirements:

14 “(1) The Outreach Program and the outreach
15 network shall be established and operated through
16 cooperation and cofunding among Federal, State,
17 and local governments, other public and private con-
18 tributors, and end users that the Secretary deter-
19 mines are appropriate for providing maximum bene-
20 fit to United States manufacturers.

21 “(2) The Outreach Program and the outreach
22 network shall utilize and leverage, to the extent
23 practicable, existing organizations, data bases, elec-
24 tronic networks, facilities, capabilities, and existing
25 standards for interconnection, and shall be designed

1 to complement rather than supplant State and local
2 programs.

3 “(3) The Outreach Program and the outreach
4 network shall be subject to all applicable provisions
5 of law for the protection of trade secrets and busi-
6 ness confidential information.

7 “(4) Access to the services available through
8 the Outreach Program and information available
9 through the outreach network servicing the Outreach
10 Program shall be limited, as appropriate, to United
11 States companies, State and local governments,
12 United States universities and colleges, and United
13 States nonprofit organizations that the Secretary
14 deems appropriate.

15 “(5) Local or regional needs should determine
16 the management structure and staffing of the Manu-
17 facturing Outreach Centers. The Outreach Program
18 shall strive for geographical balance with the ulti-
19 mate goal of access for all United States manufac-
20 turers.

21 “(6) Manufacturing Outreach Centers should
22 have the capability to deliver outreach services di-
23 rectly to United States manufacturers, actively work
24 with, rather than supplant, the private sector, and to
25 the extent practicable, maximize the exposure of

1 United States manufacturers to demonstrations of
2 modern technologies in use, including flexible manu-
3 facturing practices.

4 “(7) The Department of Commerce shall de-
5 velop mechanisms for—

6 “(A) soliciting the perspectives of United
7 States manufacturers using the services of the
8 Manufacturing Outreach Centers and Regional
9 Centers for the Transfer of Manufacturing
10 Technology; and

11 “(B) evaluating the effectiveness of the
12 Manufacturing Outreach Centers and Regional
13 Centers for the Transfer of Manufacturing
14 Technology.

15 “(g) PLAN AND REPORTS.—(1) Within 6 months
16 after the date of enactment of this title, the Secretary,
17 after consultation with the Under Secretary, the Director,
18 the Department of Commerce Technology Advisory Board,
19 other appropriate Federal agencies, and a cross-section of
20 potential participants in the Outreach Program, shall sub-
21 mit an initial plan for the implementation of this title to
22 Congress—

23 “(A) describing how the Secretary will carry out
24 the responsibility to create, operate, and support the
25 Outreach Program and the outreach network, in-

1 including the interactive electronic linkage of Manu-
2 facturing Outreach Centers to the programs of the
3 Technology Administration and other appropriate
4 Federal, State, and local agencies;

5 “(B) establishing criteria and procedures, con-
6 sistent with the requirements of this title, for—

7 “(i) the selection of organizations to re-
8 ceive Department of Commerce services or fi-
9 nancial assistance as part of the Outreach Pro-
10 gram, including qualifications and training of
11 technology extension agents;

12 “(ii) access to services provided by partici-
13 pants in the Outreach Program and to informa-
14 tion available through the outreach network
15 servicing the Outreach Program; and

16 “(iii) the annual evaluation of the Out-
17 reach Program in achieving the purposes of this
18 title; and

19 “(C) evaluating the need for and the benefits of
20 a National Conference of States on Technology Ex-
21 tension, similar in structure to the National Con-
22 ference on Weights and Measures, and, if the Sec-
23 retary determines that such a Conference is advis-
24 able, developing, in consultation with the States and
25 other interested parties, a plan for the establish-

1 ment, operation, funding, and evaluation of such a
2 Conference.

3 “(2) Within 1 year after the date of enactment of
4 this title, the Secretary, in consultation with the Under
5 Secretary, the Director, and the Department of Commerce
6 Technology Advisory Board, shall prepare and submit to
7 the Congress a 5-year plan for implementing the Outreach
8 Program and the outreach network and clearinghouse es-
9 tablished under subsections (d) and (e), respectively. Such
10 5-year plan shall identify appropriate methods for expand-
11 ing the Outreach Program in a geographically balanced
12 manner. Such 5-year plan shall include a detailed imple-
13 mentation plan and cost estimates and shall take into con-
14 sideration and build on the report submitted under para-
15 graph (1). In the preparation of such 5-year plan, the Sec-
16 retary shall provide an opportunity for public comment,
17 and the plan submitted to Congress shall include a sum-
18 mary of comments received. Such plan may not be imple-
19 mented until 90 days after its submission to the Congress.

20 “(3) Beginning with first year after submission of the
21 5-year plan under paragraph (2), the Secretary shall an-
22 nually report to the Congress, at the time of the Presi-
23 dent’s annual budget request to Congress, on—

24 “(A) progress made in achieving the purposes
25 of the Outreach Program described in subsection (a)

1 using criteria and procedures established under
2 paragraph (1)(B)(iii);

3 “(B) changes proposed to the 5-year plan;

4 “(C) performance in adhering to schedules; and

5 “(D) any recommendations for legislative
6 changes necessary to enhance the Outreach Pro-
7 gram.

8 The report under this paragraph submitted at the end of
9 the fourth year of operation of the Outreach Program
10 shall include recommendations on whether to terminate
11 the Outreach Program or extend it for an additional pe-
12 riod not to exceed 5 years.”.

13 **SEC. 5. ADVANCED MANUFACTURING TECHNOLOGY DEVEL-**
14 **OPMENT PROGRAM.**

15 Title III of the Stevenson-Wydler Technology Innova-
16 tion Act of 1980, as added by sections 2, 3, and 4 of this
17 Act, is further amended by adding at the end the following
18 new section:

19 **“SEC. 304. ADVANCED MANUFACTURING TECHNOLOGY DE-**
20 **VELOPMENT PROGRAM.**

21 “(a) ESTABLISHMENT.—The Secretary, through the
22 Under Secretary and the Director, shall establish an Ad-
23 vanced Manufacturing Technology Development Program
24 which shall include projects to develop advanced manufac-
25 turing systems, networks, electronic data exchange, and

1 which shall be complementary with advanced manufactur-
2 ing technology development programs supported by other
3 Federal agencies.

4 “(b) PURPOSE.—The purpose of the Advanced Manu-
5 facturing Technology Development Program is to create
6 collaborative multiyear technology development programs
7 involving United States companies and, as appropriate, co-
8 operating with other Federal agencies and laboratories,
9 the States, worker organizations, universities and colleges,
10 independent research organizations, and other interested
11 persons, in order to develop, refine, test, and transfer de-
12 sign and manufacturing technologies and associated appli-
13 cations, including advanced computer integration and elec-
14 tronic networks for manufacturing information exchange.

15 “(c) PROGRAM COMPONENTS.—The Advanced Manu-
16 facturing Technology Development Program shall in-
17 clude—

18 “(1) the advanced manufacturing research and
19 development activities at the Institute; and

20 “(2) one or more technology development
21 testbeds within the United States, selected in ac-
22 cordance with procedures, including cost sharing, es-
23 tablished for the Advanced Technology Program es-
24 tablished under section 28 of the National Institute
25 of Standards and Technology Act (15 U.S.C. 278n),

1 whose purpose shall be to develop, refine, and test
2 advanced manufacturing, data exchange, and
3 networking technologies and associated applications
4 and to facilitate the transfer of such technologies
5 and applications to United States manufacturers.

6 “(d) FUNCTIONS AND ACTIVITIES.—The Advanced
7 Manufacturing Technology Development Program, under
8 the coordination of the Secretary, through the Director,
9 shall—

10 “(1) test and, as appropriate, facilitate and
11 support the development of the equipment, computer
12 software, and systems integration necessary for the
13 successful operation within the United States of ad-
14 vanced design and manufacturing systems and asso-
15 ciated electronic networks;

16 “(2) establish at the Institute and the tech-
17 nology development testbed or testbeds—

18 “(A) prototype advanced computer-inte-
19 grated manufacturing systems;

20 “(B) prototype electronic networks linking
21 manufacturing systems; and

22 “(C) prototype clean manufacturing sys-
23 tems;

24 “(3) assist United States companies to develop
25 voluntary consensus standards relevant to advanced

1 computer-integrated manufacturing operations, in-
2 cluding standards for networks, electronic data
3 interchange, and digital product data specifications;

4 “(4) help to make high-performance computing
5 and networking technologies an integral part of de-
6 sign and production processes where appropriate;

7 “(5) conduct research to identify and overcome
8 technical barriers to the successful and cost-effective
9 operation of advanced manufacturing systems and
10 networks and to promote and facilitate electronic
11 data exchange;

12 “(6) facilitate the efforts of United States com-
13 panies to develop and test new applications for man-
14 ufacturing systems, networks, and information ex-
15 change;

16 “(7) involve in the Advanced Manufacturing
17 Technology Development Program, to the maximum
18 extent practicable, both those United States manu-
19 facturers which make manufacturing technology and
20 related computer equipment and software, and Unit-
21 ed States companies which buy such technology,
22 equipment and software;

23 “(8) identify training needs, as appropriate, for
24 managers, engineers, and employees of United
25 States manufacturers in the operation and applica-

1 tions of advanced manufacturing technologies and
2 networks, with particular emphasis on training for
3 production workers in the effective use of advanced
4 manufacturing technology;

5 “(9) work with United States companies, uni-
6 versities, independent research organizations, and
7 other interested parties to develop standards, tools,
8 and techniques for the use of advanced computer-
9 based training systems, including multi-media and
10 interactive learning technologies;

11 “(10) involve small businesses in its activities;

12 “(11) exchange information and personnel, as
13 appropriate, between the technology development
14 testbeds and the outreach network created under
15 section 303(d); and

16 “(12) coordinate its activities with the National
17 High-Performance Computing Program described in
18 section 101 of the High-Performance Computing Act
19 of 1991 (15 U.S.C. 5511) to ensure that both pro-
20 grams are complementary and compatible.

21 “(e) TESTBED AWARDS.—(1) In selecting applicants
22 to receive awards under subsection (c)(2) of this section,
23 the Secretary shall give preferential consideration to appli-
24 cants that have existing computer expertise in manufac-
25 turing applications and the ability to diffuse such expertise

1 to United States companies, and that, in the case of joint
2 research and development ventures, include both suppliers
3 and users of advanced manufacturing technology. In the
4 case of systems described in subsection (d)(2)(C), the Sec-
5 retary shall also give preferential consideration to appli-
6 cants that have existing program expertise in clean manu-
7 facturing, including the areas of concurrent engineering,
8 materials research, and environmental science, and which
9 have a technology transfer mechanism in place to transfer
10 testbed results of a clean manufacturing program to in-
11 dustry participants.

12 “(2) An industry-led joint research and development
13 venture applying for an award under subsection (c)(2) of
14 this section may include one or more State research orga-
15 nizations, universities, Federal laboratories, independent
16 research organizations, or Regional Centers for the Trans-
17 fer of Manufacturing Technology (as created under section
18 25 of the National Institute of Standards and Technology
19 Act) and other organizations as the Secretary considers
20 appropriate.

21 “(f) ADVICE AND ASSISTANCE.—(1) Within 6 months
22 after the date of enactment of this title, and before any
23 request for proposals is issued, the Secretary shall hold
24 one or more workshops to solicit advice from United
25 States companies and from other Federal agencies, par-

1 ticularly the Department of Defense, the Department of
2 Energy, and the National Aeronautics and Space Adminis-
3 tration, regarding the specific missions and activities of
4 the testbeds.

5 “(2) The Secretary shall, to the greatest extent pos-
6 sible, coordinate activities under this section with activities
7 of other Federal agencies and initiatives relating to com-
8 puter-aided acquisition and logistics support, electronic
9 data interchange, flexible computer-integrated manufac-
10 turing, and enterprise integration.

11 “(3) The Secretary may request and accept funds,
12 facilities, equipment, or personnel from other Federal
13 agencies in order to carry out this section.

14 “(g) ANTITRUST SAVINGS CLAUSE.—This section
15 shall not be construed to modify, impair, or supersede the
16 operation of the antitrust laws. For purposes of this sub-
17 section, the term ‘antitrust laws’ has the meaning given
18 it in subsection (a) of the first section of the Clayton Act
19 (15 U.S.C. 12(a)), except that such term includes the Act
20 of June 19, 1936 (49 Stat. 1526; 15 U.S.C. 13 et seq.),
21 commonly known as the Robinson Patman Act, and sec-
22 tion 5 of the Federal Trade Commission Act (15 U.S.C.
23 45) to the extent that such section 5 applies to unfair
24 methods of competition.”.

1 **SEC. 6. MISCELLANEOUS AND CONFORMING AMENDMENTS.**

2 (a) DEFINITIONS.—Section 4 of the Stevenson-
3 Wydler Technology Innovation Act of 1980 (15 U.S.C.
4 3703) is amended by adding at the end the following new
5 paragraphs:

6 “(14) ‘Director’ means the Director of the Na-
7 tional Institute of Standards and Technology.

8 “(15) ‘Institute’ means the National Institute
9 of Standards and Technology.

10 “(16) ‘Assistant Secretary’ means the Assistant
11 Secretary of Commerce for Technology Policy.

12 “(17) ‘Advanced manufacturing technology’
13 means—

14 “(A) numerically-controlled machine tools,
15 robots, automated process control equipment,
16 computerized flexible manufacturing systems,
17 associated computer software, and other tech-
18 nology for improving manufacturing and indus-
19 trial production of goods, including bio-
20 technology products, which advance the state-
21 of-the-art; or

22 “(B) novel manufacturing techniques and
23 processes not previously generally available that
24 improve manufacturing quality, productivity,
25 and practices, including engineering design,
26 quality assurance, concurrent engineering, con-

1 tinuous process production technology, inven-
2 tory management, upgraded worker skills, com-
3 munications with customers and suppliers, and
4 promotion of sustainable economic growth.

5 “(18) ‘Modern technology’ means the best avail-
6 able proven technology, techniques, and processes
7 appropriate to enhancing the productivity of manu-
8 facturers or to promoting sustainable economic
9 growth.

10 “(19) ‘Sustainable economic growth’ means eco-
11 nomic growth that enhances the national quality of
12 life and preserves environmental integrity.

13 “(20) The term ‘United States company’ means
14 an entity which the Secretary finds, based on a dem-
15 onstration by such entity—

16 “(A) maintains substantial employment in
17 the United States;

18 “(B) agrees, with respect to a technology
19 arising from assistance provided under this Act
20 or the Manufacturing Technology and Exten-
21 sion Act of 1995, to promote the manufacture
22 within the United States of products resulting
23 from that technology;

1 “(C) agrees to procure parts and materials
2 for such products from competitive United
3 States suppliers; and

4 “(D) either—

5 “(i) is a United States-owned com-
6 pany; or

7 “(ii) is a company incorporated in the
8 United States that has a parent company
9 incorporated in a country which the Sec-
10 retary finds—

11 “(I) affords to United States-
12 owned companies opportunities com-
13 parable to those afforded to any other
14 company to participate in programs
15 and to have access to resources and
16 information equivalent to the opportu-
17 nities authorized under this Act or the
18 Manufacturing Technology and Ex-
19 tension Act of 1995 to foreign-owned
20 entities engaged in commerce in the
21 United States;

22 “(II) has a standards develop-
23 ment and conformity assessment proc-
24 ess that is open and transparent, and
25 that results in standards that are fair

1 and reasonable and do not discrimi-
2 nate against United States products
3 and production processes;

4 “(III) affords to United States-
5 owned companies local investment op-
6 portunities comparable to those af-
7 forded any other company; and

8 “(IV) affords adequate and effec-
9 tive protection for the intellectual
10 property rights of United States-
11 owned companies.

12 “(21) The term ‘United States manufacturer’
13 means a United States company which the Secretary
14 finds, based on a demonstration by such company,
15 makes substantial investments in the United States
16 in research, development, and manufacturing (in-
17 cluding the manufacture of major components or
18 subassemblies in the United States).

19 “(22) The term ‘United States-owned company’
20 has the meaning given such term in section 28(j)(2)
21 of the National Institute of Standards and Tech-
22 nology Act (15 U.S.C. 278n(j)(2).

23 “(23) ‘Independent research organizations’
24 means nonprofit organizations organized primarily

1 for the purpose of conducting or managing research
2 activities.”.

3 (b) REDESIGNATIONS.—The Stevenson-Wydler Tech-
4 nology Innovation Act of 1980 (15 U.S.C. 3701 et seq.)
5 is amended—

6 (1) by inserting immediately after section 4 the
7 following new title heading:

8 **“TITLE I—DEPARTMENT OF**
9 **COMMERCE AND RELATED**
10 **PROGRAMS”;**

11 (2) by redesignating sections 5 through 10 as
12 sections 101 through 106, respectively;

13 (3) by redesignating sections 16 through 22, as
14 sections 107 through 113, respectively;

15 (4) by inserting immediately after section 113
16 (as redesignated by paragraph (3) of this sub-
17 section) the following new title heading:

18 **“TITLE II—FEDERAL**
19 **TECHNOLOGY TRANSFER”;**

20 (5) by redesignating sections 11 through 15 as
21 sections 201 through 205, respectively;

22 (6) by redesignating section 23 as section 206;

23 (7) in section 4—

1 (A) by striking “section 5” each place it
2 appears and inserting in lieu thereof “section
3 101”;

4 (B) in paragraphs (4) and (6), by striking
5 “section 6” and “section 8” each place they ap-
6 pear and inserting in lieu thereof “section 102”
7 and “section 104”, respectively; and

8 (C) in paragraph (13), by striking “section
9 6” and inserting in lieu thereof “section 102”;

10 (8) in section 105 (as redesignated by para-
11 graph (2) of this subsection) by striking “section 6”
12 each place it appears and inserting in lieu thereof
13 “section 102”;

14 (9) in section 106(d) (as redesignated by para-
15 graph (2) of this subsection) by striking “7, 9, 11,
16 15, 17, or 20” and inserting in lieu thereof “103,
17 105, 108, 111, 201, or 205”;

18 (10) in section 201(i) (as redesignated by para-
19 graph (5) of this subsection) by inserting “loan,
20 lease, or” after “may”; and by inserting “Actions
21 taken under this subsection shall not be subject to
22 Federal requirements on the disposal of property.”
23 after “activities.”;

1 (11) in section 202(b) (as redesignated by para-
2 graph (5) of this subsection) by striking “section
3 14” and inserting in lieu thereof “section 204”;

4 (12) in section 204(a)(1) (as redesignated by
5 paragraph (5) of this subsection) by striking “sec-
6 tion 12” and inserting in lieu thereof “section 202”;

7 (13) in section 113 (as redesignated by para-
8 graph (3) of this subsection) by striking “sections
9 11, 12, and 13” and inserting in lieu thereof “sec-
10 tions 201, 202, and 203”;

11 (14) in section 206 (as redesignated by para-
12 graph (6) of this subsection)—

13 (A) by striking “section 11(b)” in sub-
14 section (a)(2) and inserting in lieu thereof “sec-
15 tion 201(b)”;

16 (B) by striking “section 6(d)” in sub-
17 section (b) and inserting in lieu thereof “section
18 102(d)”;

19 (15) by adding at the end of section 201 (as re-
20 designated by paragraph (5) of this subsection) the
21 following new subsection:

22 “(j) ADDITIONAL TECHNOLOGY TRANSFER MECHA-
23 NISMS.—In addition to the technology transfer mecha-
24 nisms set forth in this section and section 202 of this Act,
25 the heads of Federal departments and agencies also may

1 transfer technologies through the technology transfer and
2 extension programs of the Department of Commerce and
3 the Department of Defense.”.

4 **SEC. 7. MANUFACTURING TECHNOLOGY CENTERS.**

5 Section 25 of the National Institute of Standards and
6 Technology Act (15 U.S.C. 278k), is amended—

7 (1) by amending the section heading to read as
8 follows: “MANUFACTURING TECHNOLOGY CENTERS”;

9 (2) in subsection (c)(5), by striking “which are
10 designed” and all that follows through “operation of
11 a Center” and inserting in lieu thereof “to a maxi-
12 mum of one-third Federal funding. Each Center
13 which receives financial assistance under this section
14 shall be evaluated during its sixth year of operation,
15 and at such subsequent times as the Secretary con-
16 siders appropriate, by an evaluation panel appointed
17 by the Secretary in the same manner as was the
18 evaluation panel previously appointed. The Secretary
19 shall not provide funding for additional years of the
20 Center’s operation unless the evaluation is positive
21 and the Secretary finds that continuation of funding
22 furthers the goals of the Department. Such addi-
23 tional Federal funding shall not exceed one-third of
24 the cost of the Center’s operations”;

25 (3) by striking subsection (d); and

1 (4) by adding at the end the following new sub-
2 sections:

3 “(d) If a Center receives a positive evaluation during
4 its third year of operation, the Director may, any time
5 after that evaluation, contract with the Center to provide
6 additional technology extension or transfer services above
7 and beyond the baseline activities of the Center. Such ad-
8 ditional services may include, but are not limited to, the
9 development and operation of the following:

10 “(1) Programs to assist United States compa-
11 nies that are engaged in manufacturing and their
12 employees, including front-line production workers,
13 in the Center’s region to learn and apply the tech-
14 nologies, techniques, and processes associated with
15 systems management technology, electronic data ex-
16 change, or improving manufacturing productivity.

17 “(2) Services focused on the testing, develop-
18 ment, and application of manufacturing and process
19 technologies within specific technical fields such as
20 advanced materials or electronics fabrication for the
21 purpose of assisting United States companies that
22 are engaged in manufacturing, both within the Cen-
23 ter’s original service region and in other regions, to
24 improve manufacturing quality, product design,

1 workforce training, and production efficiency in
2 those specific technical fields.

3 “(3) Industry-led demonstration programs that
4 involve United States manufacturing technology con-
5 sortia to provide ongoing research, technology trans-
6 fer, and worker training assistance to their mem-
7 bers. An award under this paragraph shall be for no
8 more than \$500,000 per year, and shall be subject
9 to renewal after a 1-year demonstration period.

10 “(e) In addition to any assistance provided or con-
11 tracts entered into with a Center under this section, the
12 Director is authorized to make separate and smaller
13 awards, through a competitive process, to nonprofit orga-
14 nizations which wish to work with a Center. Such awards
15 shall be for the purpose of enabling those organizations
16 to provide outreach services, in collaboration with the Cen-
17 ter, to United States manufacturers located in parts of
18 the region served by the Center which are not easily acces-
19 sible to the Center and which are not served by any other
20 manufacturing outreach center. Organizations which re-
21 ceive such awards shall be known as Local Manufacturing
22 Offices. In reviewing applications, the Director shall con-
23 sider the needs of rural as well as urban manufacturers.
24 No single award for a Local Manufacturing Office shall
25 be for more than three years, awards shall be renewable

1 through the competitive awards process, and no award
2 shall be made unless the applicant provides matching
3 funds at least equal to the amount received under this sec-
4 tion.

5 “(f) In carrying out this section, the Director shall
6 coordinate his efforts with the plans for the National
7 Technology Outreach Program established under section
8 303 of the Stevenson-Wydler Technology Innovation Act
9 of 1980.”.

10 **SEC. 8. STATE TECHNOLOGY EXTENSION PROGRAM.**

11 (a) ESTABLISHMENT.—Section 26(a) of the National
12 Institute of Standards and Technology Act (15 U.S.C.
13 2781(a)), is amended—

14 (1) by inserting immediately after “(a)” the fol-
15 lowing new sentence: “There is established within
16 the Institute a State Technology Extension Pro-
17 gram.”; and

18 (2) by inserting “through that Program” imme-
19 diately after “technical assistance”.

20 (b) ADDITIONAL AUTHORITIES.—Section 26 of the
21 National Institute of Standards and Technology Act (15
22 U.S.C. 2781) is amended by adding at the end the follow-
23 ing new subsection:

24 “(c) In addition to the general authorities listed in
25 subsection (b) of this section, the State Technology Exten-

1 sion Program also may, through merit-based competitive
2 review processes—

3 “(1) make awards to States and conduct work-
4 shops, pursuant to section 5121(b) of the Omnibus
5 Trade and Competitiveness Act of 1988, in order to
6 help States improve their planning and coordination
7 of technology extension activities;

8 “(2) support technology demonstration projects
9 to help States provide technical assistance and serv-
10 ices to United States manufacturers that will im-
11 prove their productivity and competitiveness;

12 “(3) support State efforts to develop and test
13 innovative ways to help United States manufacturers
14 improve their technical capabilities;

15 “(4) support State efforts designed to help
16 United States manufacturers in rural as well as
17 urban areas adopt modern manufacturing tech-
18 nologies;

19 “(5) support State efforts to assist interested
20 United States manufacturers in the defense industry
21 to adapt to modern or advanced manufacturing tech-
22 nologies as they convert to nondefense or dual-use
23 purposes;

24 “(6) support worker technology education pro-
25 grams in the States at institutions such as research

1 universities, community colleges, labor education
2 centers, labor-management committees, and worker
3 organizations in production technologies critical to
4 the Nation's future, with an emphasis on high-per-
5 formance work systems, the skills necessary to use
6 modern or advanced manufacturing systems well;

7 “(7) help States develop programs to train per-
8 sonnel who in turn can provide technical skills to
9 managers and workers of United States manufactur-
10 ers; and

11 “(8) support State efforts to assist United
12 States manufacturers to develop on-the-job training
13 in modern and advanced manufacturing tech-
14 nologies, techniques, and processes and to promote
15 the development and adoption of modern and ad-
16 vanced manufacturing technologies.”.

17 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

18 There are authorized to be appropriated to the Sec-
19 retary of Commerce for carrying out the amendments
20 made by this Act—

21 (1) \$146,600,000 for fiscal year 1996; and

22 (2) such sums as may be necessary for each of
23 the fiscal years 1997 through 2000.

○

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