

To Whom it May Concern:

Thank you for this opportunity. WestCAMP, a not for profit corporation in Utah has long been working on a solution to the questions raised. The question appears to be that for the amount of Federal dollars being spent each year in support of research conducted in Federal Labs, research universities and other research organizations there is very little return on investment in any form.

We have studied this problem and feel strongly that the solution is somewhat obvious to us i.e. we as a country continue to invest in the research but invest very little in the effective deployment of good inventions that result from that research. Even SBIR and STTR, as good as they are, do not assist much with the deployment of newly developed technologies. By allocating 3% of the annual research budget to deployment we will incentivize the marketplace to move newly developed technologies into commercial applications and products. We call this new deployment program FAST (Federal Acceleration of State Technology) Deployment Program.

We have attached a graphical representation of what we see as being an appropriate process plus we have provided a written description and even legislation that has been through Congressional drafting to make this happen from a funding standpoint.

Please call with questions.

Kindest regards,

Mike

**G. MICHAEL ALDER**

**Chairman, WestCAMP, Inc**

**And**

**Director, Technology Transfer**

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# Federal Assistance to State Technology (FAST) Deployment Program

## *Problem:*

- The Federal research budget funds research at Universities and Federal Labs. Only about 25% of the newly generated intellectual property stemming from this research is getting licensed. The rest becomes excess inventory that is just sitting on the shelf while the patents age.
- Individual states are investing more and more precious state dollars into new technology development and deployment to support their own economies with barely any assistance from the federal government. The states are resource constrained. A partnership between the states and federal government would be a timely investment that would accelerate moving newly developed technologies into the marketplace while generating many new jobs and tax revenues that could help the states and the nation with job creation.
- There is a growing need for more money to be invested into accelerating the movement of innovative technologies into industrial applications. The amount of funding being invested by individual states in technology deployment and development since 1997 has increased more than ten times in the last three decades. It is estimated that combined state-level investment in new technology development by the states was \$5 billion in 2017.
- The Federal government is investing about 2% (\$2.65) billion of the annual \$150 billion R&D budget into the Small Business Innovative Research (SBIR) and STTR programs, to help create innovative products wanted by federal agencies and by the private sector. This is a good program but it does little or nothing to deploy the inventory of technologies mentioned above.

## *Solution:*

- WestCAMP, Inc., a Utah nonprofit corporation proposes the development of the FAST Deployment Program. This would be a Federal funding strategy for accelerating the commercialization of newly developed technologies by providing matching funds for what states are investing in their technology development /deployment programs
- This new program would fill an important need by supplying a cash incentive that matches state investments in their technology commercialization programs. Now is the time to create a new federal/state partnership program that will provide these matching funds (prorated by the states' population, their level of investment and with an appropriate cap on funding) to help fund technology deployment in the individual states.
- The strategy of FAST funding is to have the Federal government match \$3 billion of the \$5 Billion that states are now providing to fund their high-tech developments

## *How it would work:*

- The Federal government would allocate approximately \$3 billion of the total Federal research budget to the FAST program – the funds would be awarded specifically to match state funding. Funds are applied for by individual states based on their match and other funding criteria then directly distributed

to each qualifying state's designated commerce or economic development department (working in conjunction with the responsible Federal agency).

- Allocation of Federal funds would be based on the state matching funds certified for latest fiscal year. It is proposed that unused Federal funds be added to the next year's available pool.
- States will grant the funds received from the FAST Program to those who propose the best ways to commercialize a selected university or Federal Lab technology in the form of \$500,000 grants. The awards would be based on specific developed guidelines, state qualifications, and the Technology Needs Assessment Score (a method of qualifying recipients).
- Matching the state level funds with \$3 billion federal funds would create 200,000 to 400,000 new or retained jobs. This would create approximately \$2.7 billion in additional federal taxes that will be returned to the government annually while simultaneously improving the economy. Therefore, the direct return-on-investment could be 90%.

*Facts:*

- Small and medium-sized manufacturers (SMEs) produce 98% of the U.S. made products consumed in American markets. Allocation of FAST funds would be based on state manufacturing employees as a percent of all U.S. manufacturing employees.
- States are investing increasingly more money in their Centers of Excellence, Venture Funds and similar technology development and deployment programs to help stimulate local economies.
- Technology commercialization depends heavily on the ability of manufacturers to produce viable products.
- There is a universal shortage of early risk capital for deploying leading edge new technologies
- The Department of Labor estimates a job multiplier of 3.2 for new high-tech jobs. Thus the 200,000 jobs per year created by high-tech industries generate 640,000 other jobs.
- Regular jobs have a job creation multiplier effect of 1.12. High-Tech jobs have a job creation multiplier effect of 3.21.
- High-Tech manufacturing jobs pay from 125% to 200% of the average job.

It is proposed that we create and locate the National Center for Technology Deployment in Utah at the Utah Valley University as the hub for the program (first as a pilot and then as the fully developed national center for the program). This Center will implement the FAST Deployment Program from its inception.

Contact Mike Alder 801 885-1681 or Dave Sorensen 801 637-8824

S.

To establish the Federal Acceleration of State Technologies Deployment Program  
and for related purposes.

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IN THE SENATE OF THE UNITED STATES

September 30, 2009

Mr. \_\_\_\_\_ introduced the following bill; \_\_\_\_\_.

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A BILL

To establish the Federal Acceleration of State Technologies Deployment Program and for related purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress  
assembled,*

**SEC. 1. SHORT TITLE; TABLE OF CONTENTS**

(a) SHORT TITLE.—This Act may be cited as the “Federal Acceleration of State Technologies (FAST) Deployment Act of 2009”.

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

- |         |   |
|---------|---|
| Sec. 1  | Short title; table of contents.   |
| Sec. 2  | Findings.   |
| Sec. 3. | Purpose.  |
| Sec. 4. | Establishment of Federal Acceleration of State Technologies Deployment Program.   |
| Sec. 5. | Criteria for qualification for grants and fund utilization.                       |
| Sec. 6. | Coordination with federal agencies.   |
| Sec. 7. | Federal Funding of Federal Acceleration of State Technologies Deployment Program. |
| Sec. 8. | Establishment of manufacturing technology data base.                              |
| Sec. 9. | Authorization of appropriations.  |

## SEC. 2. FINDINGS.

(a) FINDINGS.—Congress finds that---

- (1) Individual states are currently investing approximately \$5 Billion annually into new technology development and deployment to support their local economies and to create jobs with little or no direct assistance from the federal government.
- (2) In order to continue the investment by States into the deployment and commercialization of new technologies and innovations under increasingly difficult economic circumstances, it is proposed the Federal Government become a strategic partner in the States' efforts.
- (3) The Federal Government is currently investing less than 2% (approximately \$2.65 billion) of its annual \$150 billion federal research & development (R&D) budget into industry for the benefit of small business and the nation through the Small Business Innovative Research (SBIR) and Technology Transfer (STTR) programs, to help create innovative products where a federal agency determines the need for those products. , not by the private sector market.
- (4) The Association of University Technology Managers (AUTM) that represents all U.S. research universities recently conducted a survey of 157 major research universities and found the total return on investment on funded research in the form of royalties received back by those universities over the past 10 years has been less than 5%. Thus, on average, for every \$100 million invested in research during the past decade, the aggregate return over that 10-year period is less than \$5 million.
- (5) Most university technologies have been licensed to a limited number of the 3,000 large U.S. manufacturers representing less than 2% of all U. S. manufacturers. Medium to small manufacturers, which constitute 98% of all U.S. manufacturing, have little to no interface with research universities or national labs and research institutions do not have the resources to promote their technologies to each of the 300,000 small manufacturing enterprises ( SMEs).
- (6) Only about 10% of the new technologies and innovations from research universities and national labs are actually ever licensed for incorporation into commercial private sector products. The other 90% of all new technologies and innovations resulting from such national R&D remain in inventory—completely unlicensed and unused.
- (7) The Federal Government should redirect and reallocate a portion (up to 3%) of the total annual Federal R&D budget funding each year to match funding that individual states are appropriating from their budgets to expand and accelerate the development and deployment of new technologies and innovations through U.S. small manufacturing businesses, which comprise more than 95% of all U.S. manufacturing companies.

## SEC. 3. PURPOSE

- (a) PURPOSE.—The purpose of this Act is to establish , without additional appropriations, within the Small Business Administration the Federal Acceleration of State Technologies (FAST) Deployment Program to provide matching funds to qualifying States for the acceleration of local commercialization of newly developed technologies and the promotion of small manufacturing, innovation and deployment of new technologies in the United States small manufacturing enterprises (SMEs), and to establish a national manufacturing technology needs database.

- (b) **COMPONENTS AND CRITERIA.**—This Act shall also describe the components of and the criteria for: operation of the FAST Deployment Program, the redistribution of program funding, and related support activities, anticipated in order to successfully accomplish the Program objectives.

#### **SEC. 4. ESTABLISHMENT OF FEDERAL ACCELERATION OF STATE TECHNOLOGIES (FAST) DEPLOYMENT PROGRAM**

(a) **AUTHORIZATION.**—

- (1) The Small Business Administration shall establish the Program known as the “Federal Acceleration of State Technologies Deployment Program” within the Small Business Administration with the responsibility of distributing matching federal funds to qualifying state agencies.
- (2) A total of 3% of the existing federal \$150 billion R&D budget (~\$4.5 billion) shall be reallocated and redirected into the FAST Deployment Program each year to match acceptable current state expenditures, thereby immediately doubling the initial investment that states are making in identified, high priority implementation of state-level technology deployments.
- (3) The Administrator of the Small Business Administration shall issue on an annual basis, matching grants from Program funds to qualifying states that have certified to the Administrator that the State has provided funding within their state for support of qualifying new product projects of small manufacturing (small manufacturers includes manufacturers with less than 500 employees within the U.S.), deployment of new technologies and innovations, or the acceleration of new technology deployment within their states.
- (4) The SBA Administrator shall facilitate the merger of the EDA funded Garn Advanced Manufacturing Business Innovation & Technologies (GAMBIT) project technology needs assessment into the FAST Deployment Program. Through the FAST Deployment Program, the Administrator shall provide resources for the expansion and support of the GAMBIT national manufacturing technology needs database for the purposes of assembling information on new manufacturing needs and technologies created throughout the United States, with the primary goal of providing a means for the efficient review, matching and dissemination of new technologies to meet the needs of small manufacturing enterprises (SMEs) within the U.S.

#### **SEC. 5. CRITERIA FOR QUALIFICATION FOR GRANTS AND FUND UTILIZATION**

- (a) **REGULATION CRITERIA FOR AVAILABILITY OF FUNDS.**—The Administrator shall establish, through regulation criteria as herein outlined, the official regulation criteria for controlling the distribution of authorized program funds to all eligible states and jurisdictional areas.
- (1) Ninety (90%) percent of all FAST Deployment Program authorized funds shall be made available to qualifying states for redistribution as grants to support specific, detailed technology deployment projects with competitively selected SMEs and technology based businesses. Recipient states must certify that in the year prior to receiving federal funds they have expended state funding for the deployment of new technologies, the acceleration of new technology deployment, and promotion of new product development within their states.
    - i. In order to qualify for funds provided under this provision, each state must certify to the Administrator on an annual basis through a designated state officer that in the previous year, the state expended non-federal matching funds for the specified purposes, at least equal to the level of FAST Deployment Program funding available for that state.

- ii. These Federal FAST Deployment Program funds shall be available to states for the sole purpose of providing direct funding of technology deployment project assistance to SMEs and technology based businesses for specifically state-approved projects with those companies. The program funds shall not be used as start-up capital, promoting entrepreneurship, conducting research, enhancing the availability of venture capital within a state, or any such other non-project budget specific activities. I QUESTION THIS STATEMENT BECAUSE A BULK OF THE MATCHING FUNDS WILL COME FROM THESE CATAGORIES. WHY WOULD WE NOT LET THEM USE AT LEAST A PORTION OF THE FUNDS FOR THESE PURPOSES?
- iii. Each qualifying state shall receive a base level of SME project support funding equal to \$10 million under this Act, subject to meeting the requirements of state matching funds under this provision.
- iv. All such base level FAST funds will be dispersed directly to project participant enterprises (SMEs) for implementing technology deployment and creating new products for world markets.
- v. The remainder of the 90% FAST Deployment Program funding, beyond the \$10 million per state, shall be available to all states on a pro rata basis pursuant to the number of small manufacturers within each state, provided the state has demonstrated to the SBA that the individual state has expended sufficient matching funds in the prior year to qualify for program funds for the purposes pursuant to this Act.
- vi. No state may receive matching federal funds in excess of 5% of all Federal FAST Deployment Program funds available to states, for matching fund deployment project purposes.
- (1) If available federal funds within a fiscal year are not fully distributed to the several states through certified matching project grants, the Administrator may provide additional competitive grants to states for the following purposes:
- a. Competitive grants to assist states who do not initially have sufficient matching funds during the first year of implementation to develop state investment programs for the development of mechanisms to promote the rapid deployment of new technologies for manufacturing within their state.
  - b. To provide funding to accelerate the expansion of the national manufacturing technology data base as authorized under this Act.
  - c. To provide funding to the Small Business Administration to fund activities that promote and disseminate training and implementation of the latest manufacturing best practices and tools to improve the potential success of each project..
- (2) Appropriations to carry out the provisions of this Act may remain available for obligation and expenditure for such period or periods as the Administrator deems appropriate.
- vii. A State in receipt of matching funds shall allocate received funds based on federal guidelines, state established qualifications, and the Technology Needs Assessment Score established as part of maintenance of the national manufacturing technology data base.

- viii. After consultation and input from participating States, the Administrator shall issue guidelines for the use and reporting of federal matching funds consistent with this Act.
  - ix. States shall be required to report to the Administrator on an annual basis the specific use of the federal funds, and the benefits to manufacturing within the state, including the new technologies and innovations deployed and the jobs created and/or retained.
- (2) ADMINISTRATIVE FUNDING.—No more than ten percent (10%) of authorized federal FAST Deployment Program funds may be used for administrative and project support purposes which include the following:
- i. SBA PROGRAM SUPPORT AND OPERATIONS.—Five percent (5.0%) of the FAST Deployment Program funds shall be allocated to the SBA for related innovation and technology deployment activities, administration and management of its responsibilities under the Program including training of state officials in the operation and management of the FAST Deployment Program, and for such other closely related activities as the SBA shall from time-to-time determine are in the best interests of the Program. In addition, a substantial effort shall be made by the SBA to fulfill the intent of the existing Private Activity Bond (PAB) legislation to assist SMEs to secure low interest funding for their new or modified facilities and equipment in order to manufacture the products resulting from technology deployment.
    - (1) Similarly, the SBA shall provide participating SMEs with uniform guidance relative to strategic and business planning. Further definitions of some of these services are specifically as part of the SBA Structured Implementation Program defined herein. The SBA shall require periodic reporting from the funding recipients so as to develop data which can be helpful in advising and mentoring to other current and future individual projects.
    - (2) The SBA will facilitate access for SMEs to elements of the SBA Structured Implementation Program so they can implement proven methodologies in the following areas:
      - a. To validate the appropriateness of the organization of the small business enterprise by examining 10-15 applicable, quantifiable attributes, and comparing to similar attributes of already-funded and successful enterprises that have introduced new hi-tech products, preferably in the same industrial sector.
      - b. To determine the likelihood of success of the resulting new product in the marketplace by examining 10-15 relevant and quantifiable attributes, in light of past experience of similar ventures and by using established techniques for accomplishing this objective, and
      - c. To evaluate quantitatively 10-15 applicable attributes regarding the adequacy, experience and capability of the SME staff as a whole related to the demands of the specific technology deployment project.
  - ii. SBA STRUCTURED IMPLEMENTATION PROGRAM.—One-point-eight percent (1.8%) of the FAST Deployment Program funds shall be used by the SBA to develop a Structured Improvement Program for all FAST Deployment Program participants that shall include the detailed enterprise, product and staffing assessments outlined herein and project awareness, training and simulations relating to productivity and quality improvement methodologies including such items as the latest methodologies and advancements in Lean simulation and Six Sigma programs that are being successfully applied to finished goods production.



- (1) In order to uniformly manage the SME projects, it is proposed the EDA-funded Virtual Industrial Park-Enhanced Resources (VIP-ER) online project assessment and management tool be used in assessing the needs, defining the project parameters, assigning mentor-coaches, and allocating appropriate participating resources to each individual technology deployment project. With VIP-ER, each project's activity can be simultaneously tracked by the project staff, the system administrator, the SBA representative, and by external resources, which are scheduled to support the each individual project. By taking advantage of the VIP-ER system's capability to define, track and compile data from all of projects into a readily accessible database for future reference, program administrators and future technology deployment projects can benefit from insight into detailed implementation of numerous prior projects of a similar nature.
- iii. STATES PROGRAM SUPPORT AND OPERATIONS.—One-point-five percent (1.5%) of the funds shall be available to the participating states for program implementation and management, including requesting, evaluating and prioritizing proposals for technology deployment funding from SMEs, consistent with state economic development objectives.
- (3) Each state would receive a fixed base amount of approximately \$500,000.
  - (4) The remainder of the 1.5% would be distributed on a prorated basis, based on the number of small manufacturers in each state, except that no single state would receive more than 5% of the state-managed solicitation and evaluation funding.
  - (5) These funds would be available to the states to solicit SME proposals for project support to implement technology deployment, and to operate the logistics relating to the solicitation and evaluation activities of the Program.
  - (6) Each state shall evaluate proposals and rank them against a National Technology Needs Assessment Score developed in conjunction with the National Centers of Excellence (NCOE). States will prioritize proposals against economic needs, together with state and national interests. Each state would ultimately identify the local SMEs with the highest ranking scores to: be recipients of federal matched funds, to receive support in small business financing, to participate in PABs if appropriate, and to receive implementation tools, training and coaching through the FAST Deployment Program.
- iv. NCOE OPERATIONAL SUPPORT OF GAMBIT CENTER.—One-point-seven percent (1.7%) of the technology deployment funds shall be provided to the National Centers of Excellence (NCOE: [www.nationalcoe.org](http://www.nationalcoe.org)) to continue conduct the GAMBIT technology needs assessments. The SBA shall assure that at least 10% (approximately 30,000) of the SMEs are surveyed annually, and in addition the NCOE shall utilize such funding to::
- (1) develop and maintain a central data base of all funded projects.
  - (2) incorporate the survey data on each completed technology deployment project surveyed.
  - (3) develop a set of best practices to help refine the program over time and to improve it efficiency and productivity.
  - (4) develop a set a quantifiable attributes which will help individual projects in various states to better predict which technology deployment projects will have the most significant economic impact.
  - (5) issue an annual report which details the accomplishment during the reporting year which includes an Implan study detailing the quantifiable impacts on the program for each state and for the nation as a whole.

- (6) develop and maintain a database of resources used by and available to SMEs to aid in accomplishing technology deployment projects, including consultants, training facilities, testing facilities, or training programs, which are needed by SMEs to accomplish technology deployment projects.
- (3) MATCHING FUND REQUIREMENTS.—Qualifying states must provide a one-to-one cash match for all federal funds received under this Act, funds shall be expended within twenty four (24) months of receipt, and federal funds under this Act must be awarded directly to small businesses (SMEs) engaged in finished goods production (manufacturers). State funds allocated to the following areas will qualify as match:
  - i. State funding of R & D projects intended to result in an improved or new product that will resolve a specific consumer need.
  - ii. State funding of new ventures whose primary business is the introduction of an improved or new product that will resolve a specific consumer need.
  - iii. State funding that directly supports technology deployment within the small manufacturing enterprise (SME). For the purposes of this Act, “Technology Deployment” includes the following activities:
    - (1) Detailed design of new or improved products resulting from a new innovation or technology,
    - (2) Development of production processes, techniques and methods relating specifically to new or improved products,
    - (3) Identifying, securing and/or development of facilities, equipment and related supply chain necessary to produce the specific new or improved products,
    - (4) Development of expertise and training of workforce necessary to produce the new or improved products and
    - (5) Development and implementation of marketing activities necessary to introduce the new product into the market place.
  - iv. State funding of Manufacturing Extension Center growth services, including activities relating to the development, production and distribution of new or improved products.
  - v. Other granting and funding criteria as may be approved by the SBA Administrator.
- (4) QUALIFYING SMALL MANUFACTURING ENTERPRISES.—Small Manufacturing Enterprises (SMEs) that qualify for funding under this Act must:
  - i. Be majority owned by U.S. citizens;
  - ii. Be defined as a small manufacturer with less than 500 employees.
  - iii. Technology Deployment program funds must be matched locally with cash on a one-for-one basis in each category.
  - iv. The SME must be deploying a new technology that may include:
    - (1) a newly patented or patent applied for technology,
    - (2) a licensed technology from a public research and development institution or from the private sector,
    - (3) a new innovation which, when incorporated into a product, will provide a distinct difference and a substantial benefit when evaluated by a nationally accepted system of business idea evaluation/assessment
    - (4) activities identified as Technology Deployment activities by the SBA.
    - (5) technologies deployable within 24 months of the award date.

- (6) the Technology Deployment project must be available to be surveyed and quantified by the Administrator similar to the surveys performed by the Census Bureau on Manufacturing Extension projects to quantify the resulting impacts.

## **SEC. 6. COORDINATION WITH FEDERAL AGENCIES**

- (a) **FEDERAL AGENCY COORDINATION.**—The Administrator shall insure that the activities of the office of the Federally Accelerated State Technologies Deployment Program coordinates with the efforts of other Federal Agencies, in an effort to insure the grants made under this Act are a complement to and enhance the efforts of various Agency programs to promote and support small manufacturing within the United States.

## **SEC. 7. FEDERAL FUNDING OF FEDERAL ACCELERATION OF STATE TECHNOLOGIES DEPLOYMENT PROGRAM**

- (a) **AGENCY BUDGET SET ASIDE.**—Each Federal agency that has an extramural budget for research or for research and development for any fiscal year hereafter, shall provide to the Administrator of the Small Business Administration, for the specific purpose of funding the FAST Deployment Program under this Act, not less than three per centum (3%) of its extramural budget in fiscal year 2010 or in such subsequent fiscal year as the agency has such budget.
- (b) **REPORTING FUNDED ACTIVITIES.**—In order to assist Federal agencies in the fulfillment of their legislative mandates, the Administrator shall periodically report to the contributing agencies information regarding technologies that may assist and jobs that may have been created or retained in the carrying out of their agency responsibilities.

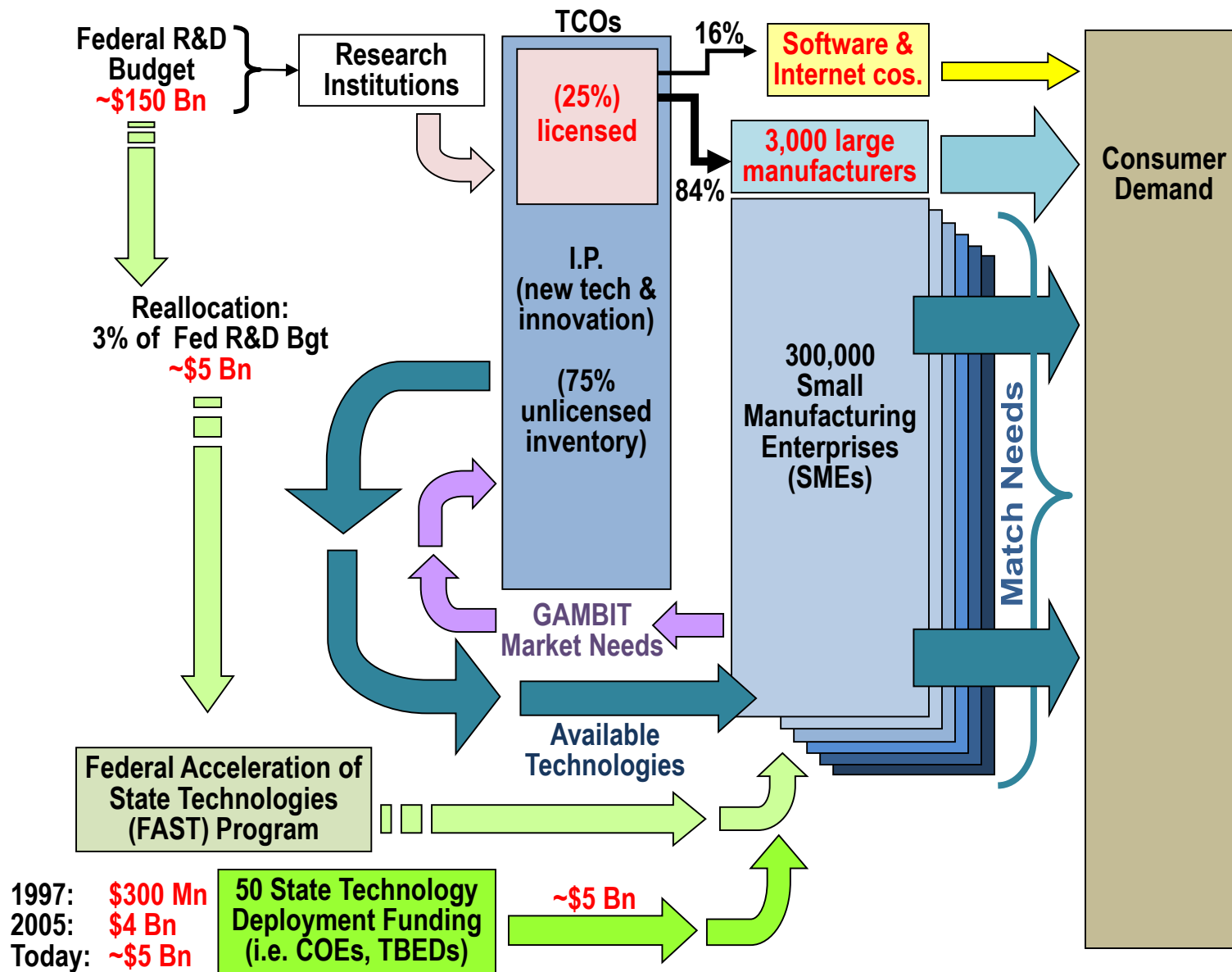
## **SEC. 8. ESTABLISHMENT OF MANUFACTURING TECHNOLOGY DATA BASE**

- (a) **ESTABLISHMENT OF NATIONAL MANUFACTURING TECHNOLOGY NEEDS DATA BASE.**—The Administrator shall provide for the assistance for the expansion and support of a national manufacturing technology data base for the purposes of assembling new manufacturing technologies created throughout the United States for the efficient dissemination of new technologies to small and medium sized manufacturers within the United States.
- i. The Administrator shall coordinate this effort with the previously funded efforts of the Garn Advanced Manufacturing Business Innovation & Technologies (GAMBIT) Center for the on going maintenance of a national repository for new manufacturing technologies.
  - ii. The Administrator shall take appropriate measures to assure the GAMBIT Center continues to protect the intellectual property of participants in the national data base.
  - iii. The national data base shall be available to U.S. manufacturers who seek new technologies or innovations to improve existing manufacturing or to promote new manufacturing and shall be provided for the primary purpose of deploying new technologies and innovations developed within the United States to U.S. SMEs.
  - iv. The Administrator shall insure coordination with other Federal Agencies in accomplishing the program objectives.
  - v. The Administrator shall optimize the existing related data resources that have previously received federal funding.

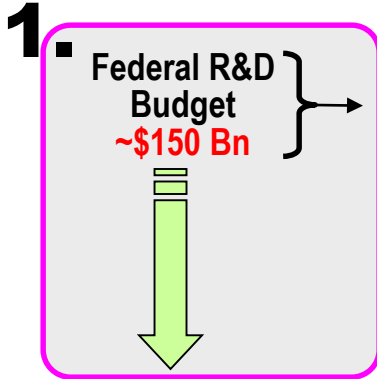
- vi. The Administrator shall maintain the national data base center established by the GAMBIT project to house the national data base and to manage its contents in coordination with existing data base projects that have previously received federal funding.
- vii. The Administrator shall continue annually to survey at least 10% of the U.S. small manufacturers utilizing the GAMBIT technology needs survey previously developed with Federal funding. The small manufacturer technologies needs surveys shall be added annually to the National Manufacturing Technologies database while appropriately protecting confidentiality and intellectual properties of U.S. small manufacturers. The Administrator shall provide access to accessible portions of the technology needs database to qualified National Labs, U.S. Research Universities and other U.S. research entities for the purpose of:
  - (a) Determining if any technologies already developed or currently under development had potential for filling the technology needs defined in the national database.
  - (b) Identifying for U.S. Research Universities, National Labs or other U.S. research entities' technology needs to improve existing U.S. manufacturing products or to introduce new products to U.S. small manufactures.
  - (c) Identifying for small manufacturers technology needs which might be addressed by technologies or innovations already existing in other small U.S. manufacturers and which could be licensed or otherwise accessed for these new applications.

**SEC. 9. AUTHORIZATION OF APPROPRIATIONS.** Such sums as are necessary to carry out the purposes of this Title are hereby authorized to be reallocated from the various eligible Agencies and redirected into the Federal Acceleration of State Technologies Deployment Program.

# GAMBIT & FAST Program Components

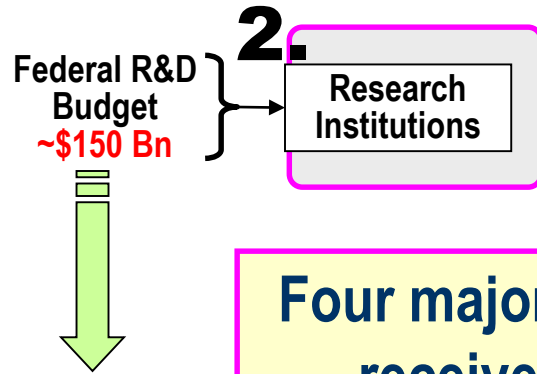


# 1. Federal R&D Budget



The Federal R&D Budget for all agencies and programs is currently about \$150 billion. Most of this funding flows to various types of large research institutions through competitive grants, contracts and other forms of agreements.

## 2. Research Institutions

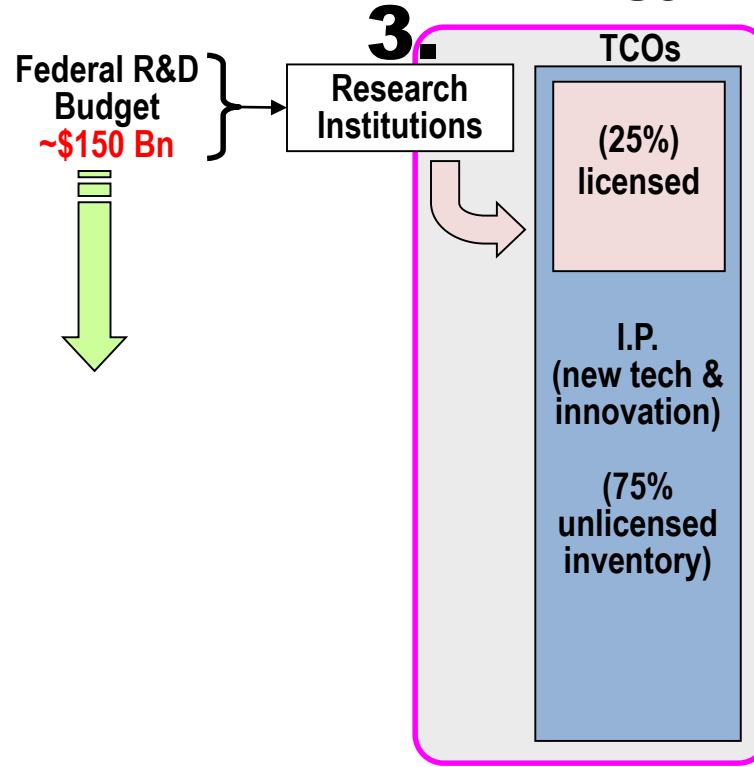


**Four major types of research institutions receive most federal R&D funding:**

- 1. Large federal labs (w%)**
- 2. Colleges & Universities (x%)**
- 3. Private R&D labs (y%)**
- 4. Private Industry (z%)**

**Of the z% that goes to private industry, about 10% is SBIR/STTR funding.**

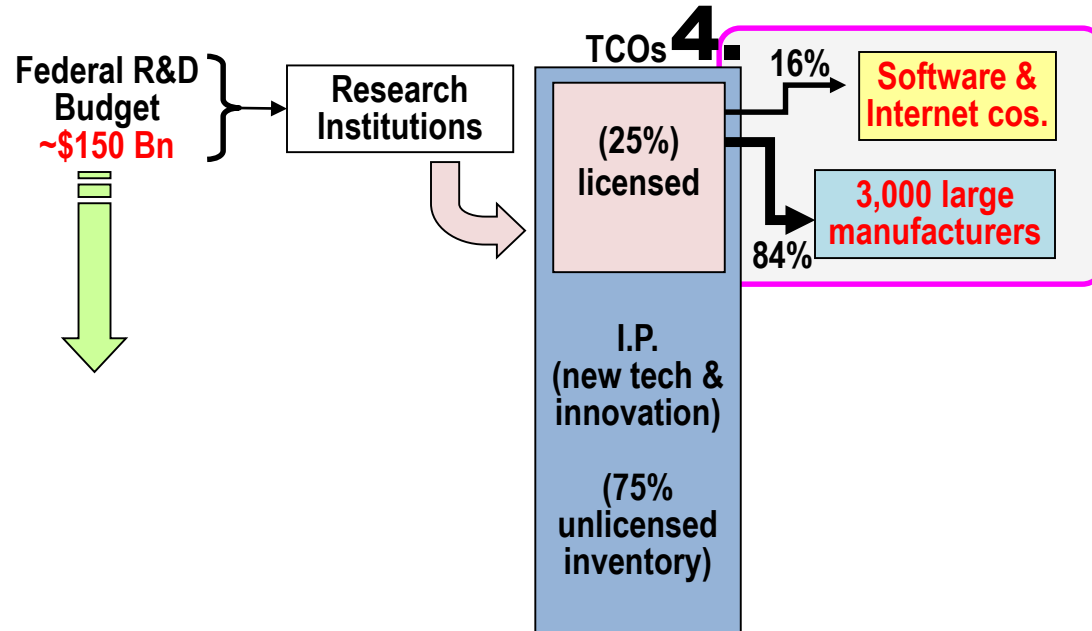
# 3. Technology Inventory/TCOs



**Technology commercialization typically depends on some kind of “Tech Commercialization Office” to move technology from basic research to development. Annually, of all tech patented and/or made available for further development, about 25% is licensed to industry, and the remaining 75% ends up as unlicensed inventory waiting for further deployment that never happens. The U.S. inventory of unlicensed tech is immense.**

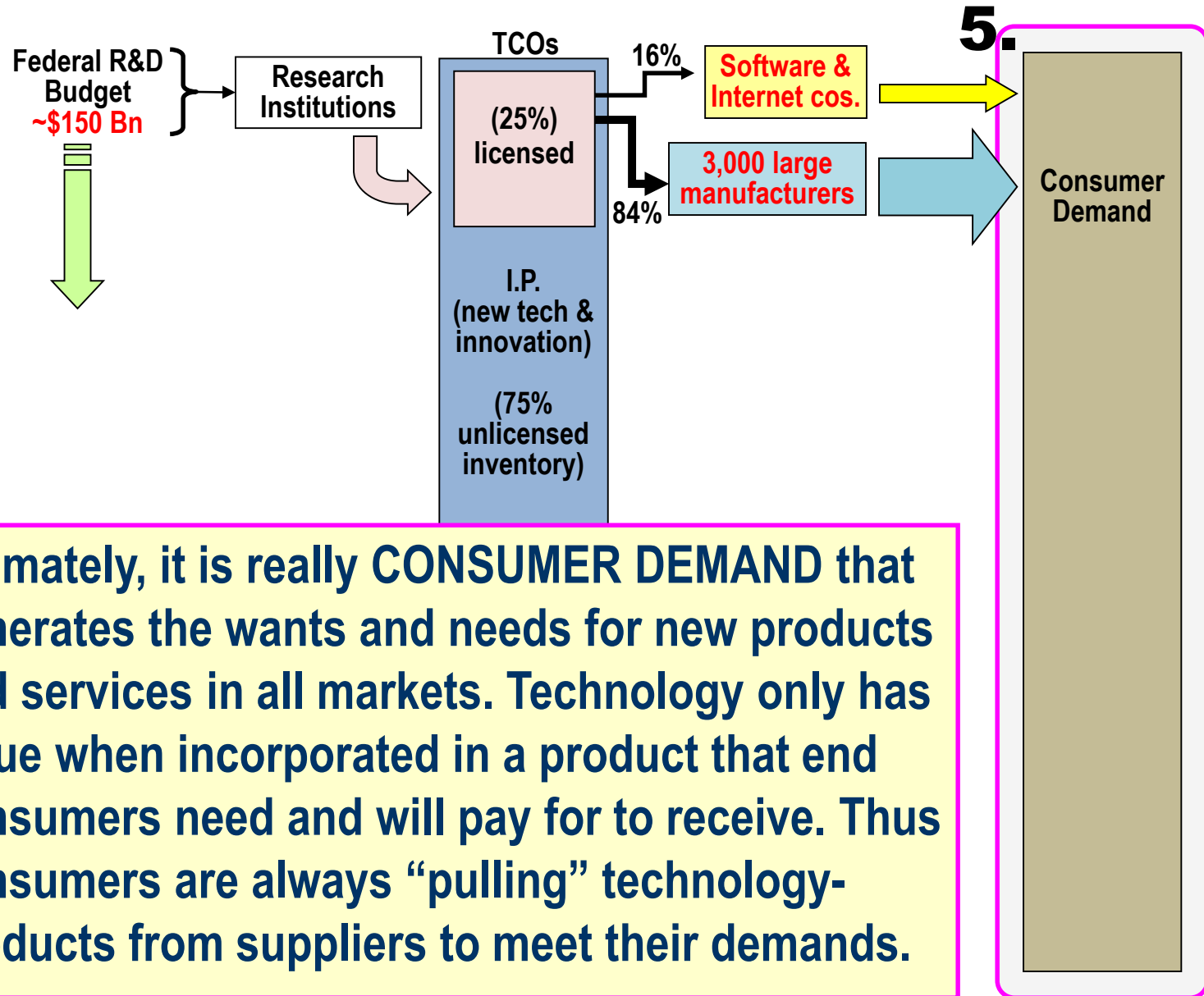


## 4. Software/Internet or Manufacturing Firms

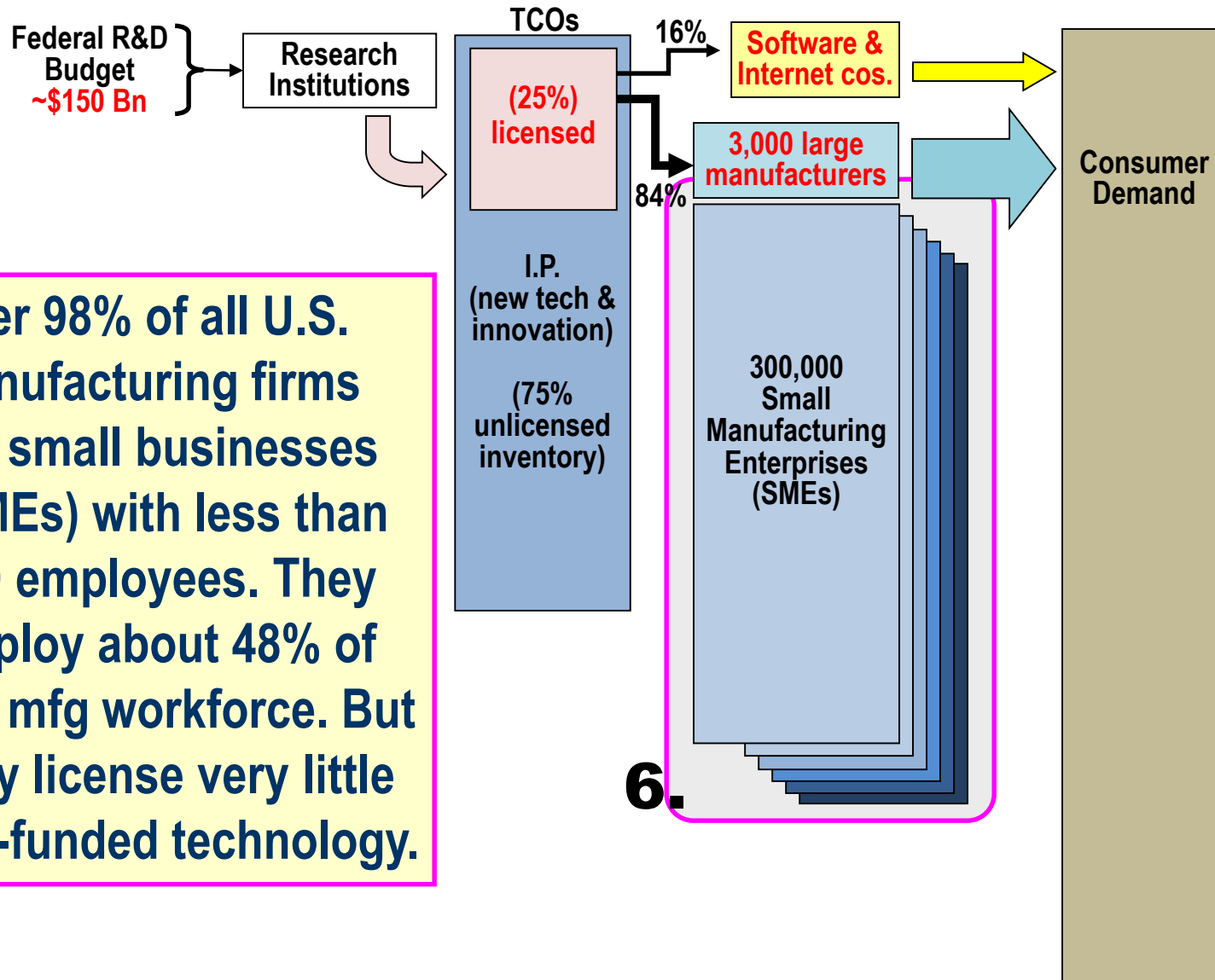


Licensed technology flows almost exclusively to 1 of 2 major development and product deployment markets: software and internet companies (16%), or large manufacturers (84%) who represent only 1% of all the nation's manufacturing firms. It is very difficult for tech researchers and their associated TCOs to find tech licensing opportunities with small manufacturers because they don't know what these smaller firms need.

# 5. Consumer Demand

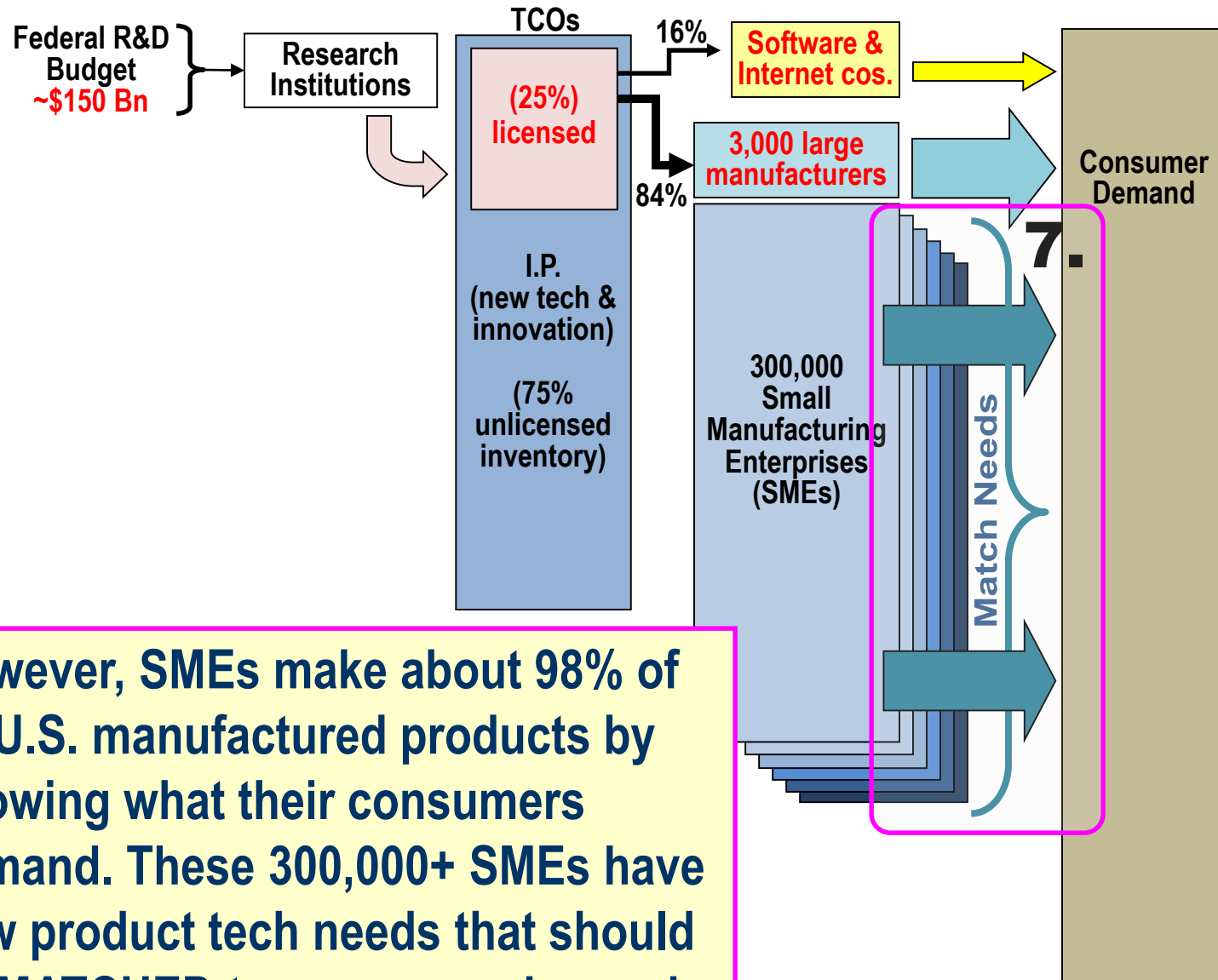


## 6. Small Manufacturing Enterprises



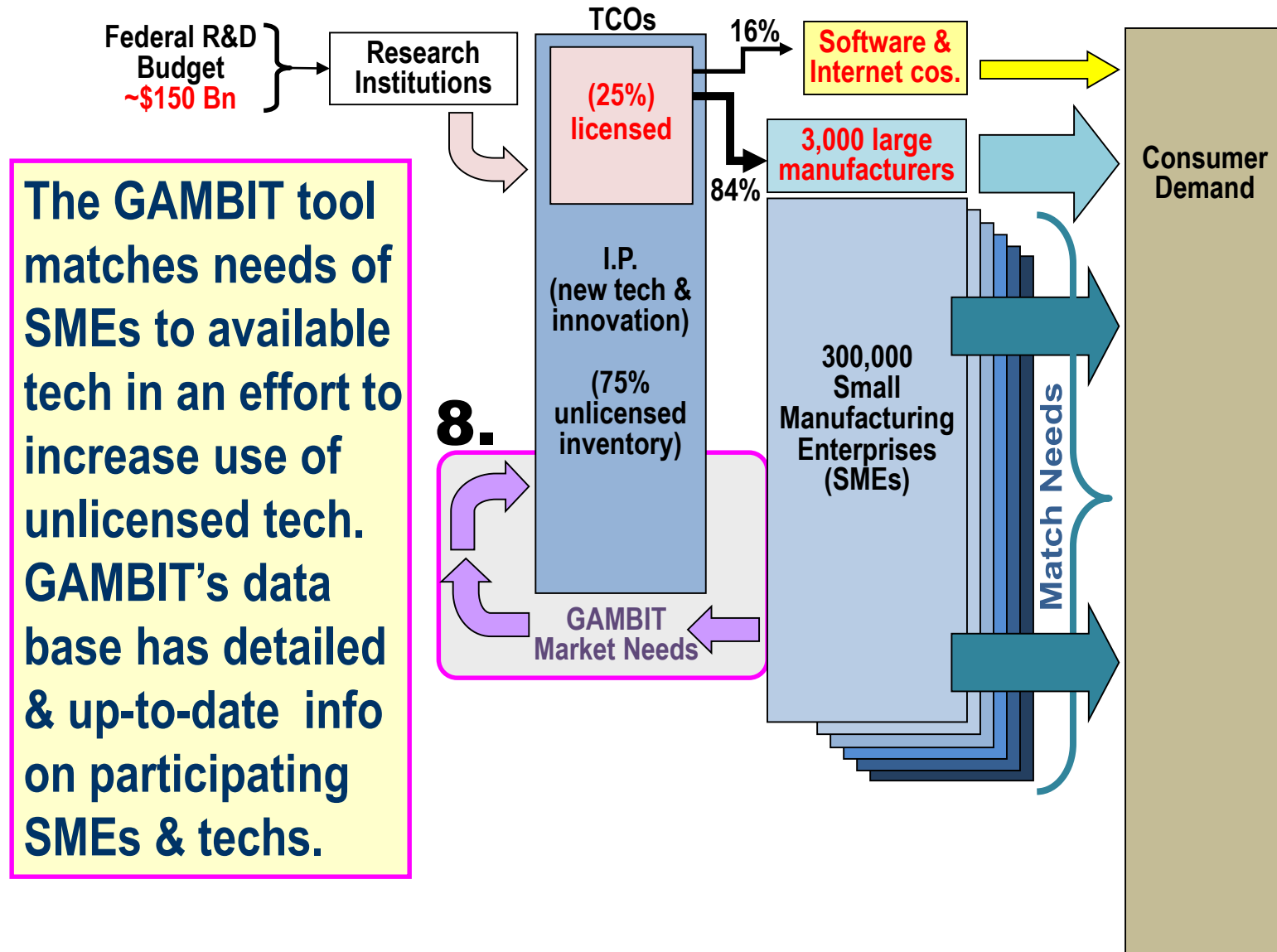
Over 98% of all U.S. manufacturing firms are small businesses (SMEs) with less than 500 employees. They employ about 48% of the mfg workforce. But they license very little fed-funded technology.

# 7. SMEs & Technology Needs for Matching

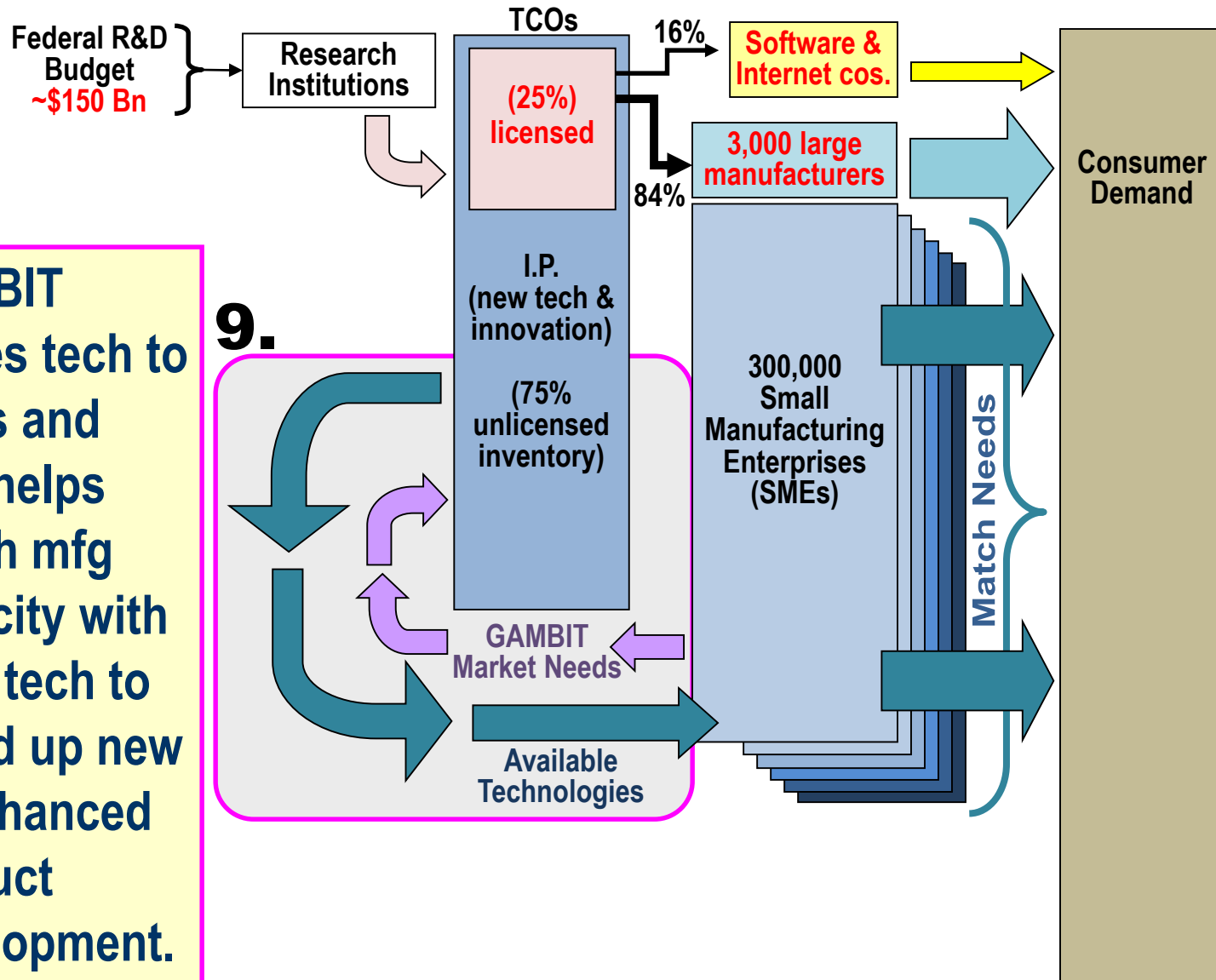


However, SMEs make about 98% of all U.S. manufactured products by knowing what their consumers demand. These 300,000+ SMEs have new product tech needs that should be **MATCHED** to consumer demands.

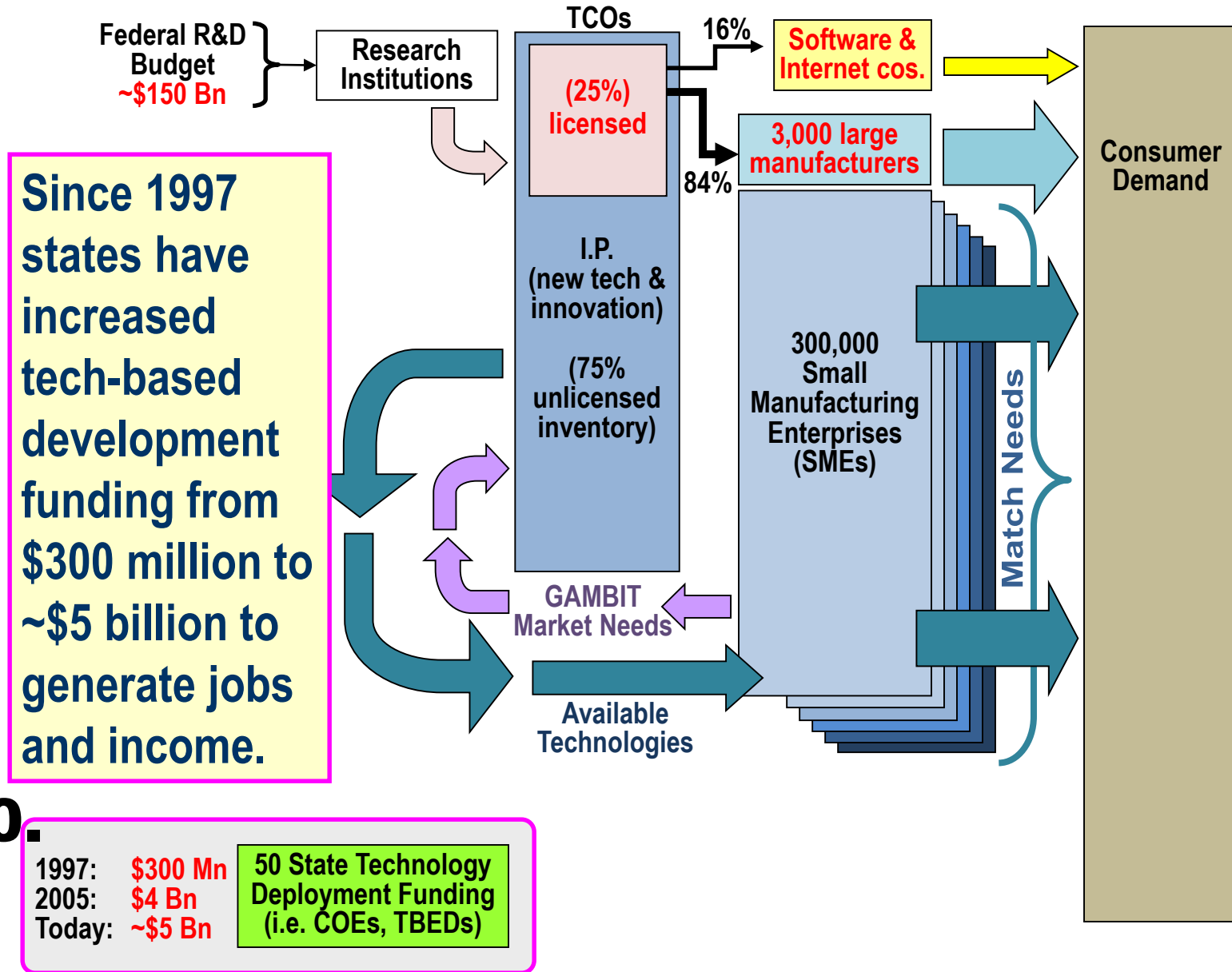
# 8. GAMBIT Surveys Small Mfg Market Needs



# 9. GAMBIT Matches Mfg Needs w/Available Tech

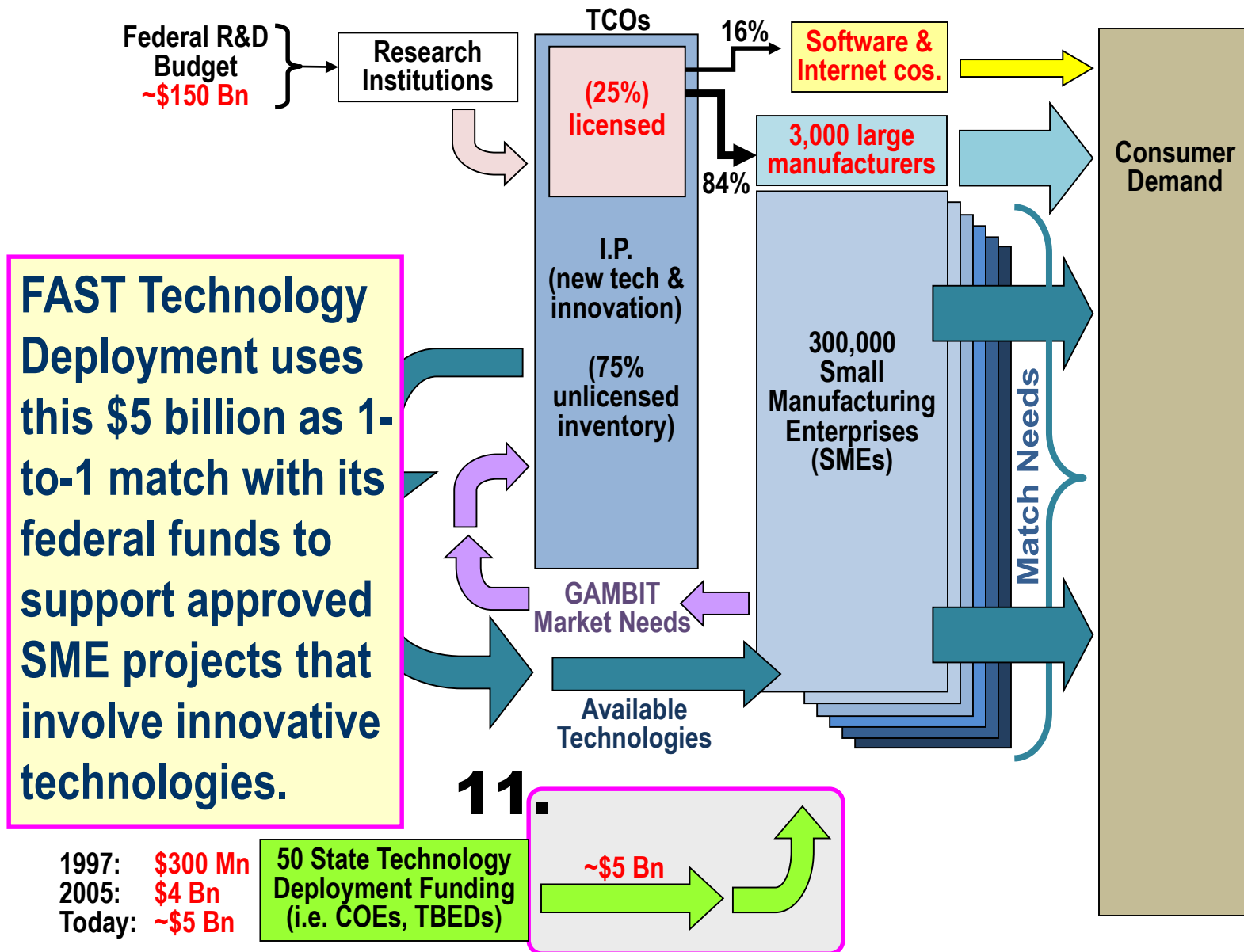


## 10. States Support Tech-Based Economic Dev



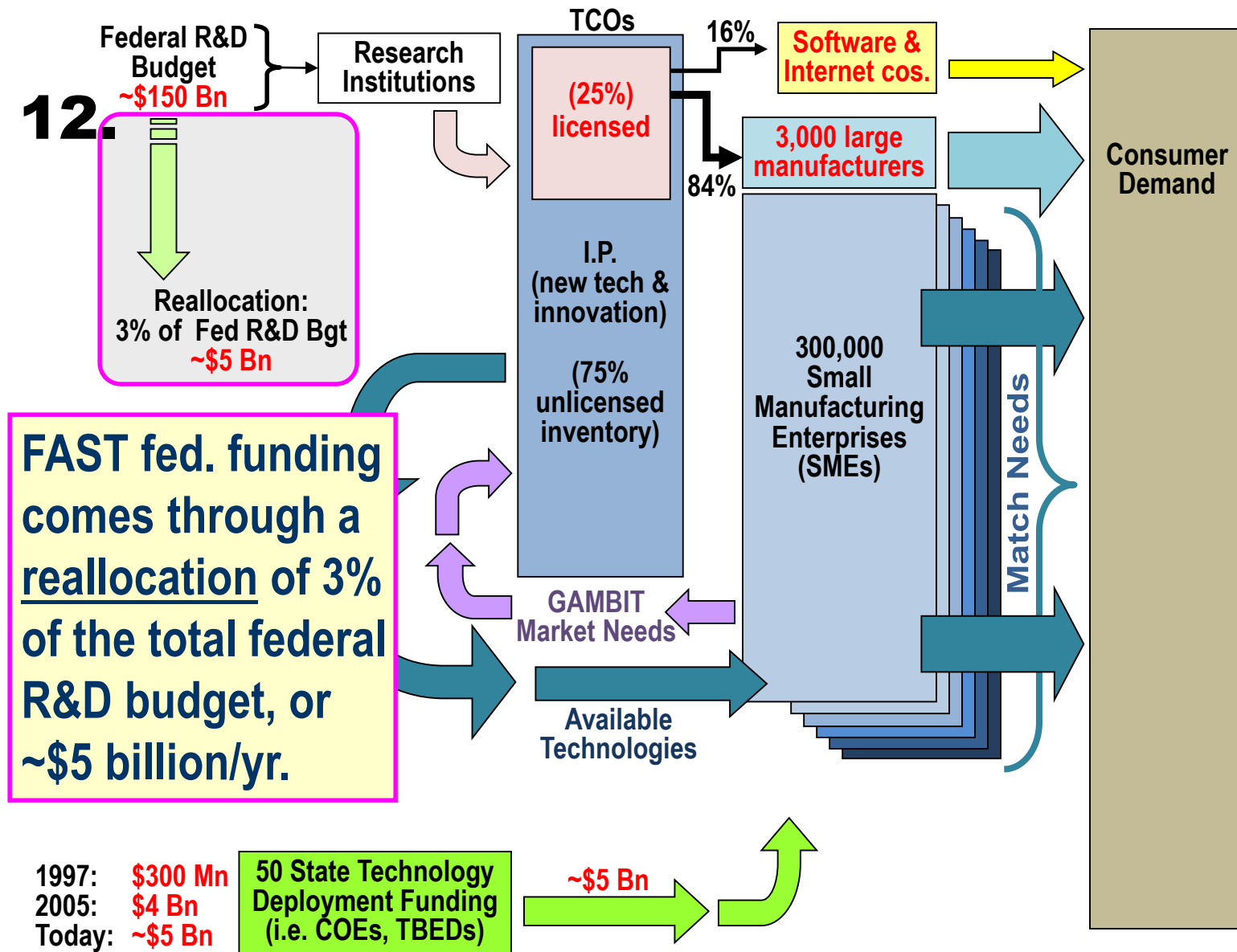
10.

# 11. GAMBIT Surveys Small Mfg Market Needs

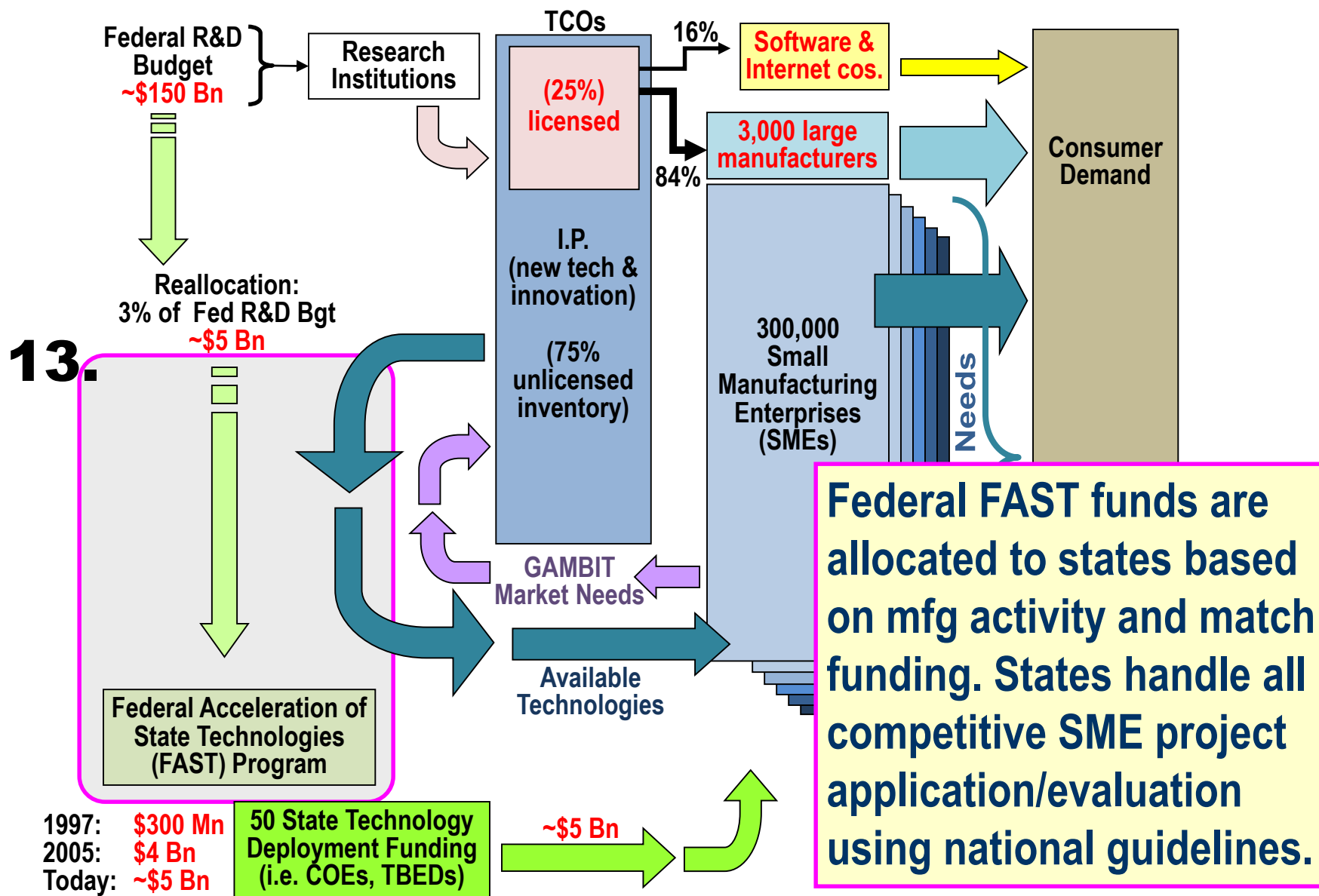




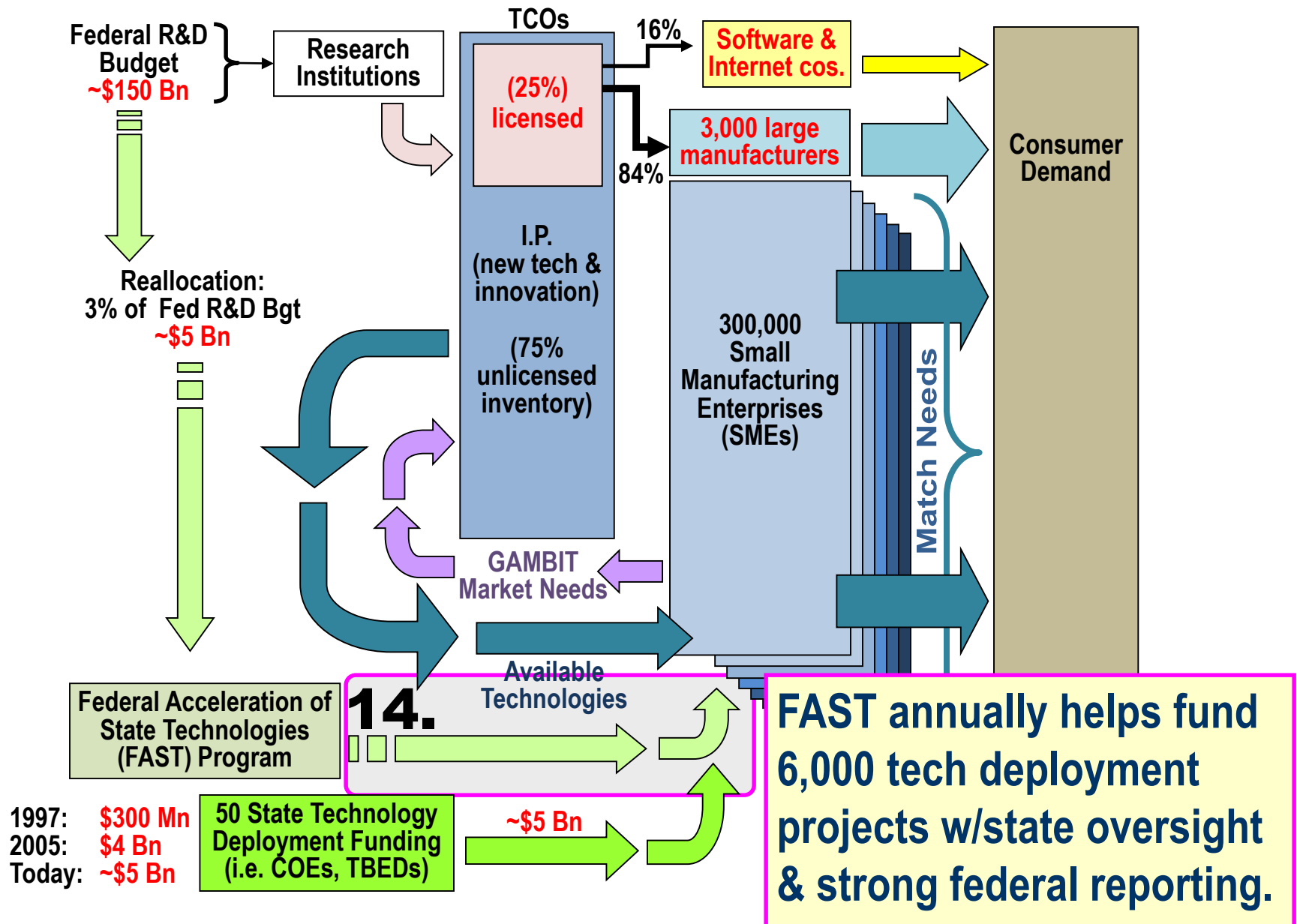
# 12. FAST Reallocates Small % of Fed R&D Budget



# 13. FAST Tech Deployment Program is State Run



# 14. FAST is for State Matched, Competitive Projects



# GAMBIT & FAST Program Components

