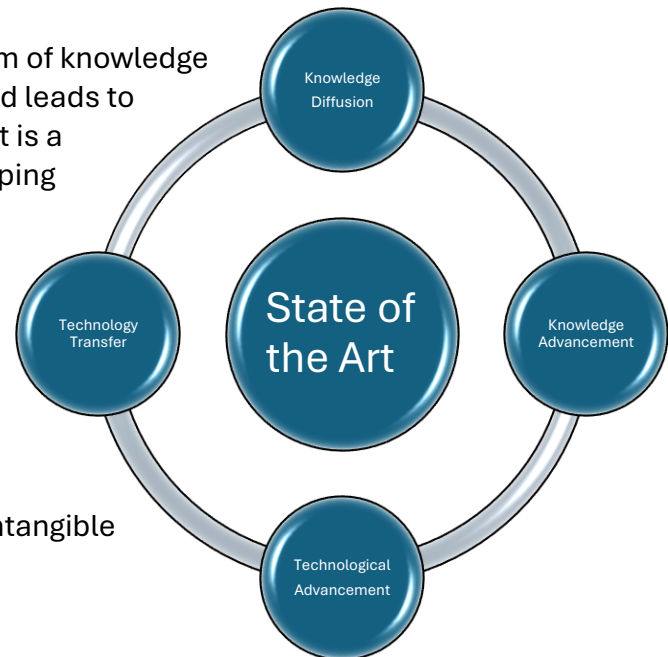


## Key Concepts in IP Policy: Innovation as a Process

### A continuum of knowledge and technology.

Innovation occupies a special place along a continuum of knowledge and technology that begins with primary education and leads to the expansion of human knowledge and capabilities. It is a never-ending process of learning, researching, developing and testing that inexorably advances the state of the art in various fields of science and technology.

**Intellectual Property Rights** in the form of patents, copyrights, trademarks, and trade secrets enable investment in innovation and creativity and assumption of attending risk through the possibility of return on investment. IP **facilitates transactions** in intangible assets.



### The A-ha! moment is the essence of transformative innovation.



Innovation cannot be reduced to a single **a-ha moment**, however significant. Innovation should be thought of as an ongoing process connecting a series of large and small a-ha moments. These breakthrough realizations and discoveries may be made by one person or entity, or more often in consecutive fashion by stakeholders with various specializations. IP-enabled mobility of knowledge assets allows this process to advance smoothly.

### The exchange of IP assets enables an ecosystem and lifecycle of innovation.

Ownership and the transfer of ownership or control among parties through the licensing, sale, and acquisition of IP rights:

1. Allows ideas to **advance** through the **innovation lifecycle** from idea to product; and,
2. Encourages **collaboration** among stakeholders with diverse specialties and skills to develop an **innovation ecosystem**.

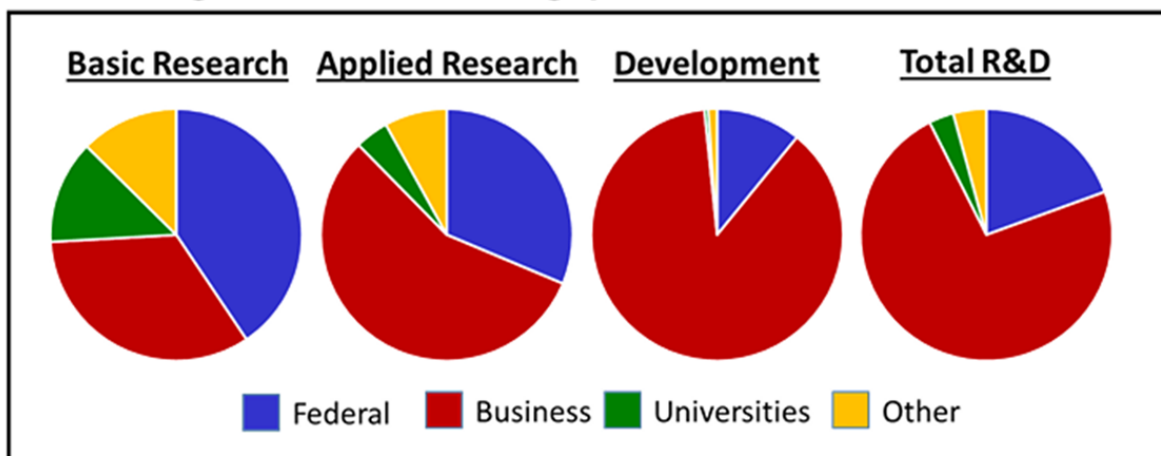


## IP Rights are the currency of the innovation ecosystem.



Private sector investment relies on IP rights at every stage of the lifecycle.

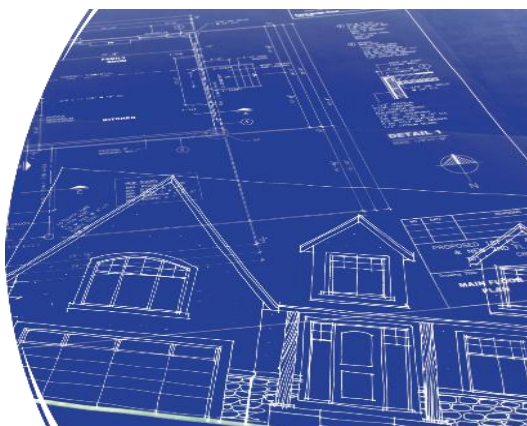
Figure 4. U.S. R&D Funding by Character and Sector, 2020



**Source:** CRS analysis of National Science Foundation, *National Patterns of R&D Resources: 2019–20 Data Update*, NSF 22-320, Tables 7-9, February 22, 2022.

**Note:** 2020 data are preliminary and may be revised.

## Innovation is an ever-evolving blueprint.



Innovation tends to incorporate numerous patented inventions or discoveries, which form the building blocks of the final product. For example, a 2012 study found tens of thousands of inventions in 14 separate patent technology classifications in use by the smartphone industry. Improvements to existing inventions and discoveries have been eligible for patents since the very first U.S. patent law enacted in 1793, which covered among other things, “any new and useful improvement... not known or used before the application.”