ATP Award Important for Early Stage Technology Development

Federal Government funding is critical to early stage technology development, providing important cost-sharing funds.[1]

"Early stage technology development" refers to the phase between invention and innovation; otherwise popularly known as the "Valley of Death" or the "Darwinian Sea." During this phase, the product specifications appropriate to an identified market are demonstrated, and production processes are reduced to practice and defined.

- The Federal Government funds 21 to 25 percent of civilian early stage technology development or $1.4 to $7.3 billion annually, depending on assumptions made (see Figure 1).[2]

- The Advanced Technology Program (ATP) is an important source of funds for civilian early stage technology development.

Individual private equity "angel" investors, corporations and the Federal Government are major funders of civilian early stage technology development—*not* venture capitalists, as might be commonly believed.[3]

- Between $5 billion (2 percent) and $36 billion (14 percent) of overall R&D spending in the United States in 1998 was devoted to early stage technology development.

- Most R&D funding is dedicated to either very risky basic research or incremental, low risk product development. That leaves a funding gap for early stage technology development where risks are still high, but if technology development is successful, the applications may be broad.

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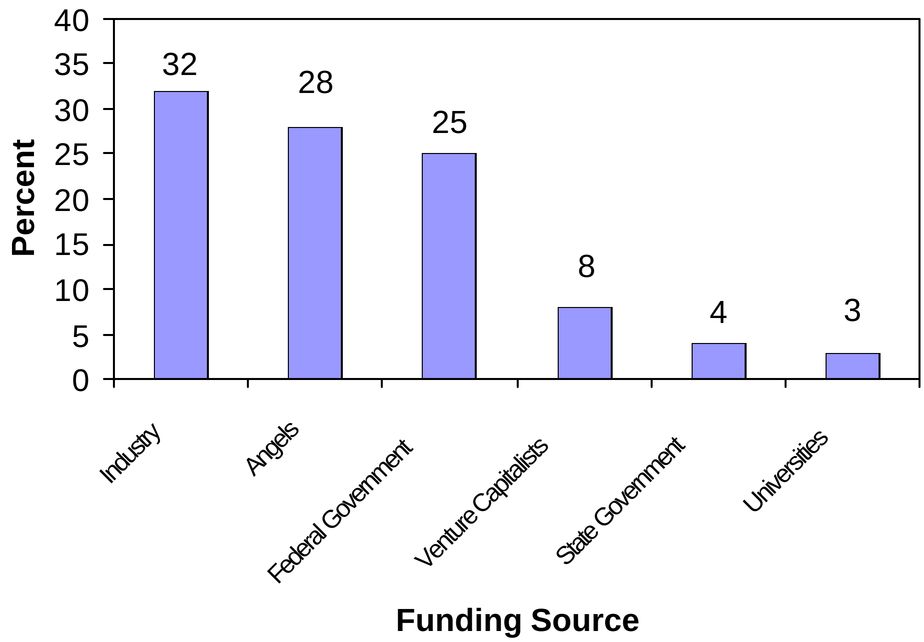
[1] **These findings are taken from Branscomb and Auerswald's report to ATP, *Between Invention and Innovation: An Analysis of the Funding for Early Stage Technology Development*.** Branscomb and Auerswald created two models based on different interpretations of their definition of early stage technology development—one with very restrictive estimates and the other with more inclusive estimates (see Figure 1).

[2] **The proportional distribution across the main sources of early stage technology development funding is similar regardless of the use of restrictive or inclusive definitions.**

[3] **Most venture capitalist money goes into product development and business development, as opposed to early stage technology development.**

Figure 1. Funding Sources for Early Stage Technology Development (restrictive estimate: $5.4 billion)



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