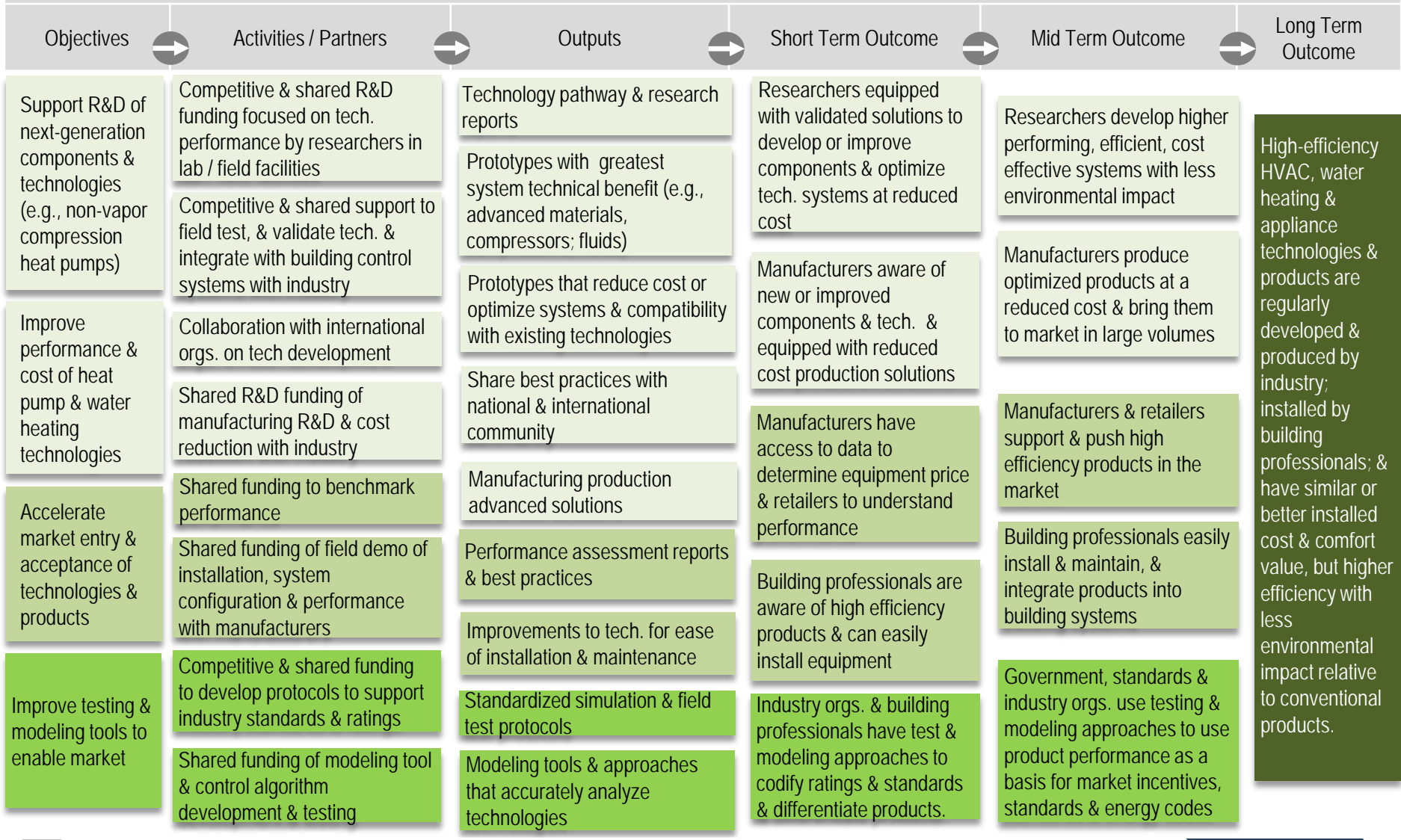


The HVAC, WH, & Appliances Sub-Program develops & accelerates energy-efficient technologies at a reduced cost in the near term & also develops & introduces next-generation technologies, both of which advance cost-effective technologies to improve system energy consumption.

*External Influences:* DOE budget, Spin-off products, Energy prices, Private sector R&D, Market incentives, Legislation / Regulation





# HVAC, Water Heating, and Appliances Research and Development Logic Model

OBJECTIVE	ACTIVITIES	KEY OUTPUT	SHORT-TERM OUTCOME	MID-TERM OUTCOME	LONG-TERM OUTCOME
-----------	------------	------------	--------------------	------------------	-------------------

Develop next-gen tech

Lab performance R&D  
Industry integration R&D

Next-gen prototypes  
Tech reports

Reduced energy loss  
Manufacturing improved

Increased private sector R&D

Improve near-term tech

Cost reduction R&D  
Field test installation and performance

Reduced-cost prototypes  
Manufacturing & installation solutions

Cost and performance data validated

Increased market support

Advanced tech and tools in market

Accelerate and enable market

Demonstrate projects  
Create standards protocols  
Develop & test tools

Performance assessments  
Simulation & test protocols  
Accurate tools

Tools & data enable new ratings & standards

Market incentives

**EXTERNAL INFLUENCES**

- DOE Budget
- Spin-off Products
- Market Incentives
- Legislation / Regulation
- Energy Prices
- Private R&D