

## Description

# A History of Huge Contributions to Science

If you think back to many of the [scientific breakthroughs](#) in the 20<sup>th</sup> century, a lot of them came from corporate research centers:

- *Xerox's Palo Alto Research Center (PARC)* developed the graphical user interface (GUI) and the point-and-click mouse that influenced the development of the Apple Macintosh so significantly.
- *AT&T's Bell Labs* (a joint venture between AT&T and Western Electric, AT&T's manufacturing division) won six Nobel Prizes in physics for inventions such as the laser and the transistor.
- *IBM's Zurich Research Lab* led the way on the development of superconductors.

## Less Patience, Faster Profits

Corporate interest in scientific research has undergone a significant change. The reputation of Bell Labs contributed to a corporate reputation of being on the cutting edge of technology for AT&T. The perceived value of that reputation, whether or not it was ever booked as 'goodwill' in the AT&T accounts, has fallen in value of cold, hard, cash profits.

Underwriting the cost of investing in the finest minds in your field for an indeterminate amount of time with the potential of discovering something really amazing will no longer fly.

Corporations run on their share price to incentivize executives and to buy other assets for stock rather than cash. The share price is dictated by analyst expectations. Miss that expectation by even a penny, and the stock price can tumble. There is no room in that scenario for [basic research](#) that may make a contribution to the broader body of knowledge but may not produce a marketable product.

## Make or Buy

Businesses often face the financial decision of 'make or buy.' If they are looking at entering a new market or capturing market share from a competitor, they can invest cash in building their own manufacturing capacity (an investment that can take time to generate a return), or they can simply buy a company that already has that manufacturing capacity in place, and take out a competitor with the stroke of a pen.

Corporate research and development (R&D) seems to be embracing that same model, albeit with some modifications. Rather than invest in your own labs, why not partner with universities and colleges to develop the research there? Any relevant patent ownership and royalty revenue issues can be dealt with by the lawyers, and the company moves forward.

If that seems like too much work, negotiate a long-term and preferably exclusive arrangement with the researchers that developed the advanced technology you are pursuing. Again, the lawyers can take care of the details.

## The Danger of Commoditization

Corporations have historically had the deeper pockets to underwrite the longer project-horizons for major technological advances. Unfortunately, profit-driven financial horizons are now much shorter.

Capital investments that aren't showing a return within 3-5 years are flagged as being either 'in trouble,' or as having 'failed,' and the corporation is expected to then take a charge on their financial accounts to write off that investment.

Treating research in the same manner will inevitably drive what little [R&D funds](#) are available in the direction of [applied research](#) with the potential to generate quick outcomes rather than making a longer-term investment in basic research projects that might take a decade or more to produce meaningful results.

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