

EXECUTIVE | SUMMARY

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Without pioneers leading the way with inventions, life would be very different. From electricity to the telephone, just imagine the difference in our daily experiences! But with the unparalleled contributions given to the world through the power of computing, we must pause and pass our thanks to

the one who led the way in computing—I. B. Machines.

What else has transmogrified nearly every facet of life more than the incredible impact of the computer? From homeland security to physics and medical research, even to human genomic science, the list is endless. It's debatable that it was inevitable. For as with any "disruptive discovery," someone has to see something that isn't there, and that many can't yet see.

Oct. 12, 1492, July 20, 1969, April 7, 1964—all dates that forever changed the course of history. And Armstrong perhaps would never have walked on the moon in 1969 if not for IBM's 1964 announcement of the mainframe.

From the time Remington Rand's Univac I accurately predicted the outcome of the 1952 presidential election—with only 5 percent of the votes tallied—unleashing the potential of "automated-tabulating," *nee* computing, became many companies' primary focus.

The Computing-Tabulating-Recording Co. (C-T-R) had transformed itself into International Business Machines, and in 1952, Tom Watson, Jr. was named president. That same year, IBM entered the computer age with the 701 Electronic Data Processing Machine. In the next decade, IBM's earnings grew tenfold, and employees from 30,000 to 127,000.

Simultaneously, IBM was contributing to several important projects that would help shape its role as the innovator of technology. The "Semi-Automatic Ground Environment" (SAGE) was one of the first early-warning systems for nuclear detection. The Semi-Automatic Business Research Environment (SABRE) system provided the power behind the first travel reservations system, largely still in use by American Airlines and others today.

But by the end of the '60s, growth began to slow dramatically, and IBM was offering a hodge-podge product line of eight different computer systems, with incompatible architectures. Customers wanting to advance often had to throw out their old computer, printers, storage and even software, and start again.

Watson tapped T. Vincent (Vin) Learson to solve the problem and provide future direction for the company. Learson, whose style was described as one of "abrasive interaction" decided to replace the executive,

Fred Brooks, with an engineering manager, Bob Evans. In short order, Evans decided to kill IBM's planned 8000 series offering and in its place decreed that IBM should make a "companywide effort to develop a total cohesive product line." Work began in the fall of '61, and after being sequestered to a remote hotel with orders not to come back until they agreed on an answer, they issued their findings in the "SPREAD" report.

The report specified that IBM would develop five processors, with the largest one being 200 times more powerful than the smallest. All software would be compatible from the low-end to the top-end. And then the bombshell: The New Product Line (NPL) would "not be compatible with our existing processors."

This last point meant that IBM was terminating 100 percent of its existing product line. IBM would then spend \$5 billion in 1964 dollars to develop, launch and produce the NPL, becoming the single largest privately financed commercial project ever undertaken.

The announcement of the System/360, planned for a full year, included six completely new processors, upwardly and downwardly compatible with the other. Within four weeks, customers had ordered more than 1,000 machines, and IBM has never looked back. It took years for the enormity of the initial investment to be recouped—IBM actually almost missed making payroll in 1966 but was rescued by another public stock offering. The pioneers leading the way to the S/360, including Brooks and Evans, were honored by the late President Ronald Reagan with the National Medal of Technology in recognition of their work.

Thus began the real age of computing. Today, IBM continues to blaze new paths with contributions from its genius staff of engineers, including Dr. Karl-Heinz Strassmeyer, an IBM scientist and Distinguished Engineer, currently respected as the "Godfather of Linux for System z."

IBM bet the bank, and its future, on the wisdom of its daring choices. That is the true spirit of a leader. As Tom Watson, Jr. said, "S/360 was the biggest, riskiest decision I ever made, and I agonized about it for weeks, but deep down I believed there was nothing IBM couldn't do."

That Sums it up. **ME**

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