



The impact of technological innovation on the financial industry

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ABSTRACT-

Such project topics for commerce would involve researching how technological innovations such as artificial intelligence, machine learning, blockchain technology, and data analytics have impacted the financial industry. The project can include interviewing industry experts, researching industry publications, and examining financial data to assess how these technologies have changed the industry.

Information technology binds and invigorates our global economy—almost the entire world population will have broadband access via mobile devices by 2018.

It's continually reshaping every aspect of economies, from architecture and banking to publishing and medical research, and creates efficiencies that bring new opportunities for growth.

In 2014, global data flows contributed \$2.8 trillion to world GDP, surpassing the impact of the global goods trade, according to McKinsey & Company.

IT also boosts worker productivity three to five times more than non-IT capital like buildings and equipment, said Robert Atkinson, president and founder of the Information Technology & Innovation Foundation.

Atkinson noted that IT advances drove nearly all the growth in labor productivity between 1995 and 2002. As computers continue to get faster and smarter, sustained increases in productivity—the essential element of economic growth—offer a bright potential for future prosperity.



The age of intelligent machines

Human intelligence has been the primordial driver of technology throughout history. Yet the human brain's astonishing reasoning power and creative complexity has one catastrophic flaw: "It [eventually] dies," said Satya Ramaswamy, global head of digital enterprise at Tata Consultancy Service (TCS).

Artificial intelligence

Artificial intelligence (AI) guided systems are helping us overcome that limitation. By 2025, it's expected that robots will be in every household and change how we live for the better. Google's Alphabet, Inc. has produced a variety of "useful robots," including a robot dog that cleans homes and could revolutionize how we do chores.

The potential applications are infinite. "Recent advancements in big data storage, cloud-based deep learning, and the leap in processing power set the stage for the deployment of algorithms that more closely mimic the learning processes of the human brain," Ramaswamy said.

Though still in their infancy, AI-guided systems such as self-driving cars, automated customer service and autonomous processing and delivery systems foreshadow other spectacular improvements in productivity.

Fears that AI-based systems could put people out of work aren't supported by historical evidence. Technological advances have invariably led to growth in unexpected areas that ends up producing a net increase in jobs. The Analysis Group, an economic consultancy in Boston, projects the value added from AI-related systems in the range of \$1.5 to \$3 trillion over the next 10 years.



That optimistic view is shared by David Jonker, senior director of big data and predictive analysis at SAP. “Critics of the industrial revolution also worried it would destroy the livelihoods of the working class,” he said. And while mechanization certainly changed the nature of work, it also dramatically increased average incomes. “The intelligent machine age will change work with the potential to dramatically improve global prosperity,” he said.

A brighter energy future

In this era of interconnected devices and IT infrastructure, basic needs still matter. Smart energy design that incorporates this spirit of innovation also enhances our productivity and improves how we live and work.

From manufacturing to smart grids to green buildings, more efficient energy use allows the economy to grow with less need for new capacity, said Gwendolyn Andersen, a senior clean energy economist at Abt Associates in Washington.

This wisdom has inspired major energy companies to jump on the interconnected bandwagon. Edison International is forging energy progress with zero net energy homes and buildings, smart thermostats and overall grid modernization.

Advances in solar-generating technology have made solar power a more attractive option for energy use. Large-scale wind farms, built offshore where there are stronger and more sustained air currents, promise big increases in wind generation capacity.

With the long-term prosperity of our planet in mind, investments in clean energy have a built-in advantage over the boom and bust cycles that characterize fossil fuels, Andersen noted. “When investing in wind, solar, and hydro, the bulk of the investment is upfront,” she said. “The investor in clean energy knows the cost of electricity for the next 30 years.”



These are just a few reasons to be optimistic about the future of our planet. The continued flow of investment capital to the technology sector appears to be one of the surest means of sustaining health and wealth for an ever larger number of people.

Technologies in the Financial Services:

1. Blockchain

Blockchain is one of the most innovative Emerging Technologies in the Financial Services Industry. This term is mostly used in the context of cryptocurrency. Companies can use blockchain technology to protect data, verify and identity, record transactions, sign contracts, and improve traceability. Because of its safety and dependability, this technology is beneficial to financial services.

2. Cloud Banking

A cloud-based architecture makes banking processes significantly more convenient and less prone to errors. Cloud banking is the ideal solution for smooth global payments, P2P transfers, and contactless payments.

3. Artificial Intelligence (AI) and Machine Learning (ML)

The banking industry has benefited from Artificial Intelligence (AI) and Machine Learning (ML). They have allowed banks to handle massive amounts of data and draw conclusions due to their ability to evaluate real-time trends, which has aided in speedy decision-making. They are increasing their effectiveness while operating more efficiently. This has decreased the time and cost of several banking processes.

4. Neo Banks

Neo or digital banks have broken the monopoly of a few huge names in the banking business by making banking convenient and accessible. These banks would be a less expensive alternative to existing banks because they would not require physical branches. Because most transactions will be conducted online, bank branches will continue to play a minor role.

5. Embedded Finance

Embedded finance is a new tech in financial services that will overgrow in 2022. Embedded finance is a concept that allows non-financial platforms to integrate payments for loans,



insurance, debit cards, and investment instruments. Embedded financial services are especially beneficial for e-commerce enterprises since they help improve client loyalty by facilitating transaction speed.

Clients used to go to the bank for a loan, fill out an application, undergo an evaluation process, and wait for approval. Thanks to embedded finance, customers may now receive credit and buy whatever they need with a few clicks on a store's website.

6. Regtech

State agencies and financial markets each have their criteria for banking institutions. Companies frequently struggle to comply with so many of these rules. As a result, businesses spend a lot of money on lawyers to oversee this process or face fines if they don't follow fintech legislation. It's hard to follow every regulation, especially when the list of laws keeps growing. Regtech is becoming increasingly popular as a result of this. It enables financial institutions to monitor the correctness and legality of their actions automatically.

Identifying clients, processing and preserving data, and calculating financial risks are all responsibilities performed by Regtech. This assists in adhering to legal requirements and avoiding fines.

7. Robotic Process Automation (RPA)

Robotic process automation is used to automate back-end office activities such as customer onboarding, security checks, credit card and mortgage processing, etc. The financial services industry will gradually use RPA to finish work more quickly, save money, and boost organizational efficiencies while enabling employees to focus on more critical tasks like customer service.

8. Big Data

Speaking of the new technologies in financial services, we can't forget to mention Big Data. Big Data is a term used in finance to describe large amounts of organized and unstructured data that banks and financial institutions can use to forecast consumer behaviour and build strategies. Structured data is information held internally within a corporation to give essential facts for timely decision-making. The financial sector receives analyses and generates massive volumes of data every second.

9. Advanced Cyber Security

Cyber security never loses its importance, and it has emerged as one of the most critical financial market trends. Financial information is susceptible and prone to cyber-attacks. A data leak can be highly costly for financial institutions.



10. Open Banking

Open banking is a program that allows banks to exchange data on their customers with fintech startups and other financial institutions. Data can be shared via programming interfaces (APIs), which enable a website or app to access the bank's database.

References-

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