

**Artificial Intelligence and
Product Development**

Dr. Mohammed R. Ahmed, Webster University, FL
Dr. Betty E. Ahmed, Liberty University, VA

May 26, 2023

The Finance, Global Management, Economics, IT, Marketing, MIS, and Healthcare
Management Research Conference, New York, NY

1

Artificial Intelligence

- *It is not a new concept*
- *Digital technology*
 - Microprocessors
- Rapid change in digital technology
 - Computing speed
 - Capacity
 - Capabilities
 - Storage
- Intelligent systems
 - Autopilot (analog) and program trading (digital)

© 2023 Mohammed R. Ahmed

2

**Artificial Intelligence In Business and
Management**

- The paper aims to share how artificial intelligence can be used in developing a new product or service. This paper builds the bridge to understand the applications of AI in new products or service development. It will also include a discussion on artificial intelligence and 4C's new product or service development process and presents the applications of AI in the 4Cs process.

© 2023 Mohammed R. Ahmed

3

Artificial Intelligence & Human Intelligence

- Artificial intelligence systems are created by humans
- Systems can solve problems using logic, apply knowledge to enhance capabilities, learn and apply knowledge to produce desired outcomes, and a few other skills of the mind
- Lacks emotions and emotional intelligence
- Systems include hardware, software, and peopleware
- Humans will hold the edge over AI capabilities because humans can learn, think, reason, use emotional energy, and solve problems

© 2023 Mohammed R. Ahmed

4

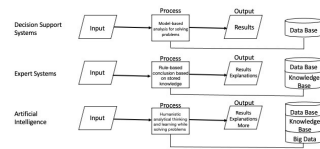
Artificial Intelligence In Business and Management

- AI systems are designed to perform specific tasks by humans to enhance the capabilities of managers in business and management decision-making, and human intelligence creates AI that helps humans to develop new and powerful systems. It is a circular function of growth.

© 2023 Mohammed R. Ahmed

5

Systems for Decision Support and Problem Solving



2018 Mohammed R. Ahmed

© 2023 Mohammed R. Ahmed

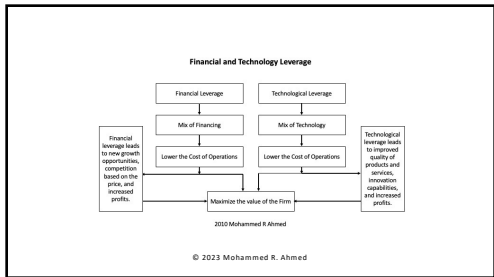
6

Artificial Intelligence Leverage

- In business, we use both financial and technological leverage to generate synergy. Firms invest in technology to create leverage by reducing the cost of operations and increasing profits and cash flow. The following simple diagrams show financial and technology leverage and its impact on the firm's value.

© 2023 Mohammed R. Ahmed

7



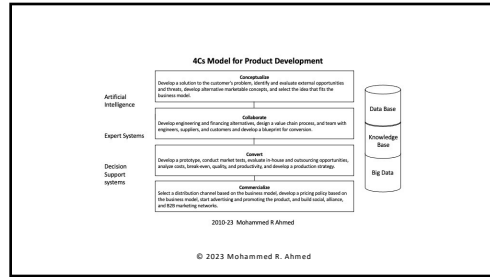
8

Artificial Intelligence In Business and Management

- The proposed 4Cs NPD model includes four stages, and four steps are: 1) Conceptualize, 2) Collaborate, 3) Convert, and 4) Commercialize. The following simple diagrams show the 4Cs of New Product development.

© 2023 Mohammed R. Ahmed

9



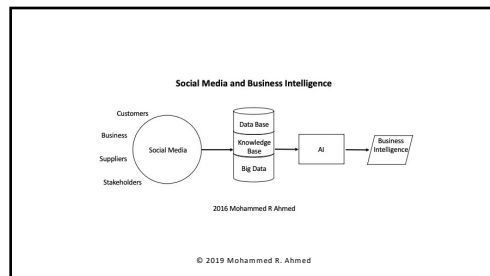
10

Artificial Intelligence In Business and Management

- Social media allows businesses and customers to connect twenty-four hours a day. Social media platforms enable companies to create virtual platforms, electronic communication, and share information with customers. Social media companies attract billions of people to their online platforms by making them free to access. The use of AI by social media companies to provide related customer and market information for business decisions has made them valuable business partners.

© 2023 Mohammed R. Ahmed

11



12

Conclusion

- New Product Development is critical for the growth and survival of firms. It is not merely incorporating new technologies and design and test marketing. It involves analysis of the internal and external environment, value chain analysis, business model alignment, the firm's strategic focus, and collaboration of participants from other industries to develop a product that will contribute to its growth. Incorporating AI in the model enhances the capability and reliability of the 4Cs model in successfully developing a new product and generating future growth. The product development model with AI systems will help management understand the new product's potential success in the marketplace, investment risk exposure in the NPD process, and the product's potential growth based on the new product's life cycle.

© 2023 Mohammed R. Ahmed

13

Questions

© 2019 Mohammed R. Ahmed

14

Thanks

© 2019 Mohammed R. Ahmed

15

References

Ahmed, Mohammed R, Why are We Concerned About Artificial Intelligence (AI)?
(2023), <https://doi.org/10.21497/ijam.44265906>, 1-5.
Ahmed, Mohammed R, Simplified Business Model (April 2, 2021). Ahmed, Mohammed R, simplified Business Model Compensating (April 2, 2021). International Journal of Business Administration, Vol. 12, No. 3, pp. 36-41, 2021.
