



Transforming CSDs with AI

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Understanding Artificial Intelligence (AI)

▶ **Definition of AI:**

Technology that enables machines to mimic human intelligence and behavior.

▶ **Components of AI:**

- ▶ **Machine Learning:** Algorithms that learn from and make predictions based on data.
- ▶ **Natural Language Processing:** Enables machines to understand and interact using human language.
- ▶ **Robotics:** The use of robots to automate tasks.
- ▶ **Predictive Analytics:** Using data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data.

▶ **Evolution in finance:**

From simple automation to complex decision-making systems

AI in the Financial Industry

▶ Risk Management:

AI detects patterns and predicts future risks by analyzing vast amounts of data.

▶ Fraud Detection:

AI systems can identify fraudulent activities faster and more accurately than human analysis.

▶ Customer Service:

Chatbots and virtual assistants provide 24/7 customer support and advice.

▶ Algorithmic Trading:

AI algorithms can execute trades at the best possible prices and times, maximizing efficiency.

AI in Securities Services

- ▶ **Predictive Analytics:**

Forecasts market trends and movements to aid in investment decisions.

- ▶ **Regulatory Compliance:**

Monitors and ensures compliance with ever-changing regulatory requirements.

- ▶ **Security:**

Enhances cybersecurity measures by identifying and responding to threats in real time.

AI in Post Trade and CSDs

▶ The Critical Role of Central Securities Depositories

- ▶ Centralized databases that keep records of securities transactions and ownership.
- ▶ Ensuring the efficiency and security of securities transactions, settlement, and record-keeping.
- ▶ Importance of Accuracy. Errors can lead to significant financial losses and legal complications.

▶ AI Enhancements in CSD Operations

- ▶ **Automated Transaction Processing:** Reduces manual entry errors and speeds up transaction times.
- ▶ **Predictive Settlement:** AI predicts settlement failures and suggests interventions to minimize default risk.
- ▶ **Client Interaction and Support:** AI-driven tools (like chatbots) provide real-time responses to client queries, improving satisfaction and engagement.

Future of AI in the CSDs

▶ Predictive Technologies:

AI could further revolutionize risk assessment and management.

▶ Challenges:

Technological, ethical, and practical challenges of implementing AI.

▶ Ethical Considerations:

Importance of responsible AI use, particularly regarding data privacy and decision transparency.

▶ Case Studies of AI in CSDs

- ▶ NASDAQ's Market Surveillance: Analyze real-time data to spot and investigate suspicious trading patterns.
- ▶ STRATE (South Africa): Implements AI to enhance the efficiency and security of its post-trade processes, including better risk management and compliance.

Conclusion and Recommendations

▶ A Simple No Brainer - 'AI Provides Significant Potential' :

AI provides a significant potential to enhance efficiency, accuracy, and security in CSD operations.

▶ Phased Integration

Start with simple automations and gradually implement more complex AI systems.

▶ Continuous Learning:

Advocate for ongoing education and training in AI for employees to ensure adaptability and competence.

▶ Importance of Embracing AI, Collaborating and Innovating:

- ▶ Keeping up with technological developments is key with experimental cases to adopt and use AI.
- ▶ Innovation is a culture and would be enabled with collaborating with other CSDs and partnering with technology providers.
- ▶ Embracing AI, collaborating with others, and experimenting and innovating are vital to maintain competitiveness and relevance.



Thank You

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