



ANALYTICS FOR RISK MANAGEMENT & STRATEGIC DECISION-MAKING

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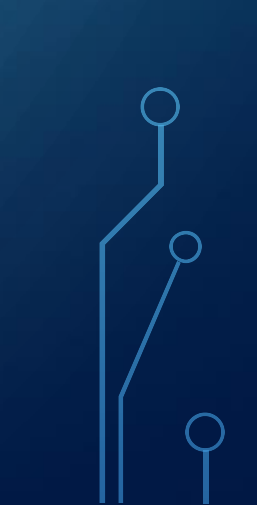
CHIEF RISK & PRIVACY OFFICER

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BENEFITS OF IMPLEMENTING BUSINESS ANALYTICS



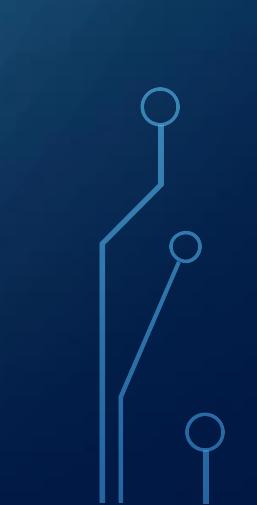
Implementing business analytics in risk management and decision-making offers numerous benefits, including

- improved decision-making accuracy & efficiency,
 - proactive risk identification, and
 - increased profitability.
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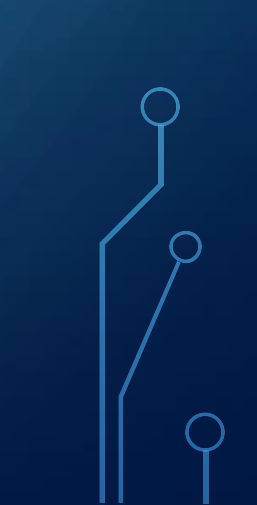


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WHY IS RISK MANAGEMENT IMPORTANT?

Risk management allows businesses to identify and mitigate potential threats that could harm their objectives.

Decision-making is the backbone of successful business operations, as it enables companies to make informed choices that drive growth and success.



RISK...

LAYERED APPROACH

1st

- **Business Units**

- Daily Operational risk process based on internal governance
- Risk Management role mostly part time

2nd

- **Risk Practitioner Teams**

- Develop and oversee risk management framework and implementation
- Risk Management role full time

3rd

- **Internal (and External) Audit**

- Validate implementation of risk processes across business
- Independent, objective assessment to Audit Committee/Board

OBJECTIVE TO SHIFT RISK LEFT

Shift-left activities that should be executed as early as reasonable. This increases clarity, reduces the cost of rework, and improves the likelihood of success.

Enterprise Risk Management

Information Security

Pen Testing




New Product Introduction

Financial Crimes & Compliance Programs



RISK...

ANALYTICS...

- 1) A process, ongoing and flowing through an entity
 - 2) Effected by people at every level of an organization
 - 3) Applied in strategy setting
 - 4) Applied across the enterprise, at every level and unit, and includes taking an entity level portfolio view of risk
 - 5) Designed to identify potential events that, if they occur, will affect the entity and to manage risk within its risk appetite
 - 6) Able to provide reasonable assurance to an entity's management and board of directors
 - 7) Geared to achievement of objectives in one or more separate but overlapping categories
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BUSINESS ANALYTICS

Business analytics plays a pivotal role in risk management by identifying, assessing, and mitigating potential risks that can impact an organization. Here's how it helps:

Identifying Risks

Real-Time Monitoring

Predictive Analytics

BUSINESS ANALYTICS

Identifying Risks: By analyzing data from various sources, such as financial, customer, and market data, companies can identify potential risks and develop strategies to prevent them from causing harm.

Real-time Monitoring: Business analytics enables real-time risk monitoring by analyzing data from multiple sources. This empowers companies to identify potential risks promptly and take necessary actions to mitigate them before they escalate.

Predictive Analytics: By leveraging historical data, companies can use predictive analytics to forecast potential risks. Armed with this knowledge, they can proactively develop strategies to mitigate those risks.



BUSINESS ANALYTICS

Fraud Detection

Cybersecurity

Supply Chain Risk Mitigation





BUSINESS ANALYTICS



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BUSINESS ANALYTICS

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Supply Chain Risk Mitigation: Managing the supply chain can be complex, but business analytics simplifies it. Companies can identify potential bottlenecks or disruptions by visualizing data and analyzing transportation routes, inventory levels, and supplier performance.



BUSINESS ANALYTICS ENHANCES DECISION- MAKING:

Data-driven Decisions: Business analytics provides valuable insights into business operations, allowing companies to make evidence-based decisions rather than relying on intuition alone. This approach leads to better outcomes.

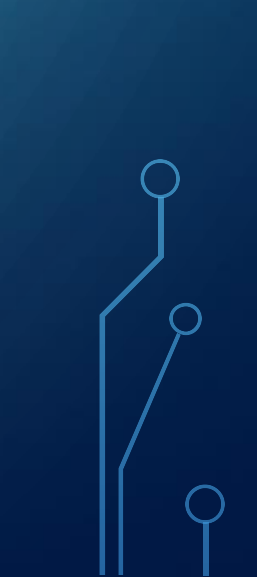





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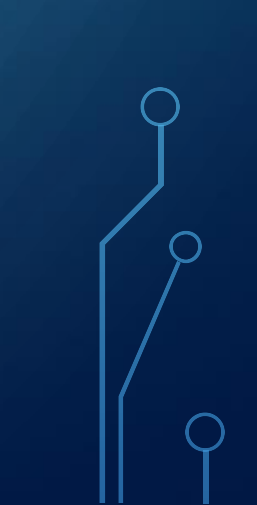



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Competitive Advantage: Analyzing market data through business analytics helps companies gain insights into their competitors' operations. This strategic approach identifies areas for improvement and gives businesses a competitive edge.





BUSINESS ANALYTICS ENHANCES DECISION- MAKING:

Customer Segmentation: Using predictive modeling and data visualization, businesses can identify customer segments and develop targeted marketing strategies tailored to each segment's unique needs and preferences.

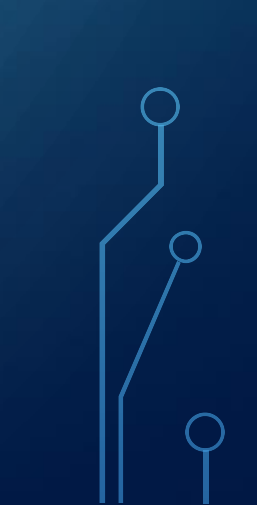





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Financial Forecasting: Business analytics facilitates financial forecasting, helping businesses make informed investment decisions. By leveraging predictive modeling, companies can forecast financial outcomes and identify potential risks and opportunities.



TOOLS

Statistical Analysis: This method uses statistical techniques like regression analysis, hypothesis testing, and correlation analysis to analyze and interpret data. It's great for spotting trends, patterns, and concluding data sets.

Data Visualization: This approach focuses on creating visual representations such as charts, graphs, and maps to help users identify patterns and trends. It's handy for non-technical users and for finding relationships between different data sets.

TOOLS

Predictive Modeling: Using historical data allows businesses to forecast future trends and potential outcomes. It helps make informed decisions and identify risks and opportunities.

Machine Learning: Machine learning algorithms are used to detect patterns and trends in data, enabling predictions based on that information. It's beneficial for uncovering hidden patterns and analyzing large, complex data sets.

Real-time Monitoring: This technique involves monitoring business operations in real-time to identify risks and opportunities as they arise. It helps address potential issues promptly and make quick, informed decisions.

CHALLENGES

Uncertain results: Risk analysis is probabilistic, so it can't provide a precise evaluation of risk exposure. It can't forecast unforeseen events, like "gray or black swan" events.

Data quality: Poor-quality data can lead to flawed analysis and decision-making.

Cost: Implementing business analytics can be expensive, especially for smaller businesses.

Technical expertise: Employing business analytics requires specialized skills and knowledge.

Subjective risk assessment: Risk assessment can be highly subjective because there are no objective criteria.

CHALLENGES

Lack of transparency: Hiding data, a lack of data, and siloed data can all cause transparency issues.

Time consumption: Preparing, collecting, and analyzing data for a complete risk analysis can require a lot of time and effort.

Overemphasis on analysis: Organizations that place too much emphasis on the analysis might not take enough time to address risks.

Risk assessments are never 100% accurate: Risk assessments tools are only as good as the data that are behind them.

RESULTS

1. Achieve Business Objectives
2. Ensure Risk Aware Setting of Objectives and Strategic Planning
3. Enhance Organizational Culture
4. Increase Stakeholder Confidence
5. Prepare and Protect the Organization
6. Prevent, Detect, and Reduce Adversity and Weaknesses
7. Motivate and Inspire Desired Conduct
8. Stay Ahead of the Game
9. Improve Responsiveness and Efficiency
10. Optimize Economic Return and Values

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QUESTIONS / TOPICS FOR DISCUSSION