Revolutionizing ServiceNow GRC with Generative AI: The Future of AI-Driven Governance

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Abstract

The research examines the role of Generative AI in enhancing governance, risk, and compliance in ServiceNow GRC. The descriptive outcomes are mixed opinions regarding the efficiency in the use of AI, optimism in transparency, and concern in the precision in the evaluation of risks. The outcomes from the correlation are minimization of errors by the use of AI, and the effect of transparency are questionable. The outcomes from the regression are the no significant effect of the use of AI in enhancing the efficiency in the processing of risks. The outcomes from the t-test are no significant differences by genders. Future research directions are the minimization of bias, ethics, and domain-specific applications to enhance governance.

Keywords: *Artificial intelligence (AI), Governance, risk and compliance (GRC), ServiceNow GRC.*

INTRODUCTION

Artificial intelligence (AI) significantly affects governance, risk, and compliance (GRC) in businesses in the modern world. ServiceNow GRC uses automation by applying the use of AI to enhance efficiency and compliance. Generative AI offers predictive capabilities to enhance the accuracy in compliance and the assessment of risks. Organizations are considering governance tools through the application of AI to remove the impact of errors by humans in decision-making. Trust and transparency in compliance by the use of AI are significant concerns to businesses. This research examines the impact of Generative AI in governance and the handling of risks in ServiceNow GRC.

Aim

The aim of this research is to investigate the potential of Generative AI in improving governance, risk management, and compliance performance within ServiceNow GRC using theoretical analyses.

Objectives

- To examine the role of Generative AI in improving Governance, Risk Management and Compliance procedures within ServiceNow GRC
- To discover the way AI-driven automation in ServiceNow GRC improves decision-making, minimizes human error, and increases regulatory compliance
- To assess the impact of Generative AI on transparency, trust and accuracy in governance activities using ServiceNow GRC frameworks
- To recommend efficient solutions for integrating Generative AI with ServiceNow GRC to improve organizational governance, risk management and compliance efficiency

Research Questions

- What role does Generative AI play in strengthening Governance, Risk Management, and Compliance procedures within ServiceNow GRC?
- How does AI-driven automation within ServiceNow GRC enhance decision-making, reduce human error, and boost regulatory compliance?
- What does Generative AI affect transparency, trust and accuracy in governance activities utilizing ServiceNow GRC frameworks?
- How can efficient solutions be offered for combining Generative AI with ServiceNow GRC to improve governance effectiveness?

RESEARCH RATIONALE

Governance, risk and compliance (GRC) processes are disposed to inaccuracy, inefficiency and compliance issues. Manual GRC processes enhance the frequency of errors, inefficiencies and delay in the operation of the company. Conventional compliance models are

unable to handle intricate regulation and dynamically changing risks [1]. Automated governance with AI in the case of ServiceNow GRC provides the solution to the automation of governance and regulation compliance. Generative AI provides predictive analytics to eliminate errors and aid decision-making. However, transparency, trust and bias problems in governance with AI are to be solved. This research explores the effect of Generative AI in making GRC efficient, and the objective is to provide the solution to enhance compliance handling.

LITERATURE REVIEW

The Role of Generative AI in Improving Governance, Risk Management, and Compliance within ServiceNow GRC

Generative AI transforms governance, risk and compliance (GRC) processes by automating compliance and reducing operation inefficiencies. Traditional models in GRC are rooted in manual processes, leading to exaggerated human errors and slow decision-making. Automated processes in AI in ServiceNow GRC enhance precision and efficiency in governance practices. Machine algorithms scan vast datasets to identify compliance risks and accurately forecast regulation updates. Organizations adopting AI-based solutions experience enhanced risk evaluation and compliance breaches reduction. Automated workflows remove governance operation inefficiencies and suppress procedural constraints [2]. Decision-making in the formulation of anticipatory compliance strategies and governance risks reduction are aided by AI-based insights.



Fig 1: Generative AI for Compliance

ServiceNow GRC utilizes Generative AI to enhance predictive governance and compliance models in enterprises. Security threats and compliance failures are monitored in real-time by tools based on domain-specific AI. Automated auditing helps in compliance with dynamically varying regulation, reducing the legal risks to enterprises [3]. Decision-making and governance framework's deployment are improved by reporting and dashboards based on AI. Organizations see the reduction in operational expenditure and regulation improvement through the deployment of AI-based GRC solutions. Transparency, bias and accountability problems in governance through AI are issues and the above issues are to be addressed to achieve reliable and ethical deployment of AI in compliance management.

AI-Powered Automation in ServiceNow GRC Improves Decision-Making, Error Reduction and Regulatory Compliance

AI-powered automation in ServiceNow GRC automates decision-making by processing and analyzing complex data to provide actionable insights. Manual processes in traditional governance models are most likely to increase the rate of errors and inefficiencies. Automated compliance monitoring ensures real-time tracking and monitoring of compliance and control risks [4]. Automated workflows by the use of AI eliminate governance inefficiencies, minimizing decision-making and reporting to regulators to the minimum. Machine learning algorithms assess compliance risks, and based on the assessment, the company enacts preventive measures [5]. Automated processing minimizes the intervention of humans, minimizing errors in governance processes. AI-based evaluation minimizes errors by identifying possible compliance breaches before they become significant issues.

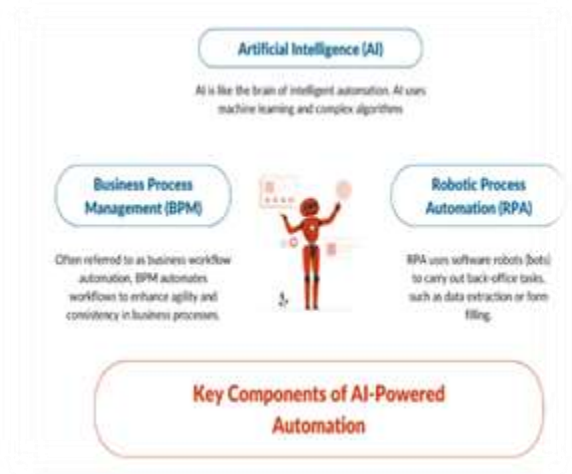


Fig 2: AI Powered Automation

ServiceNow GRC leverages the applications of AI to increase compliance and regulation compliance in

industries. Automated auditing tools offer compliance to constantly evolving regulation, reducing the imposition of fines [6]. Extensive evaluation of risks through reporting based on AI encourages governance transparency. Decision-making by decision-making officials gets assistance through recommendations from AI, and governance policies are optimized in terms of efficiency. Organizations using compliance solutions based on AI gain from regulation monitoring and reducing operation expenditure. The applications of automation through AI continue to redefine governance frameworks through improved efficiency and regulation compliance.

Impact of Generative AI on Transparency, Trust, and Accuracy in Governance Processes with ServiceNow GRC

Generative AI offers transparency in governance through real-time monitoring and auto-reporting in compliance processes. Traditional governance models are less transparent and this causes inefficiencies and compliance risks. Automated governance by means of AI in ServiceNow GRC offers accountability by tracking governance activity in a precise manner. Machine learning algorithms identify gaps and contradictions in compliance data, reducing the scope for errors [7]. Transparent governance models based on AI increase stakeholder's trust in compliance management processes.

Trust in governance models based on AI remains the core aspect in the use by businesses of compliance automation tools. Objective determination using AI-based evaluation ensures compliance to regulation, and trust in governance processes. Use of predictive analytics in the use of ServiceNow GRC assists businesses in solving compliance issues in advance, preventing future breaches [8]. Use of AI minimizes errors through automation and making compliance reporting and monitoring accurate. AI continues to redefine governance processes by promoting transparency, trust and accuracy in compliance to regulation [9]. Ethical concerns in the bias and transparency in decision-making by AI are significant concerns. Organizations are required to uphold fairness and accountability in governance models based on AI. Fixing the issues establishes trust in compliance models based on AI.

Effective Strategies for Combining Generative AI with ServiceNow GRC to Improve Organizational Compliance and Efficiency.

Integrating Generative AI into the ServiceNow GRC automates the governance and rationalizes the governance processes involved in the management of risks. Manual compliance frameworks are the standard and give rise to inefficiencies and compliance issues. Automated compliance with the deployment of AI minimizes errors in governance processes by monitoring compliance activity in real-time [10]. Predictive analytics augment the determination of possible compliance breaches in advance, reducing the incidence of compliance issues. Automated compliance to regulation with the deployment of governance frameworks minimizes the administrative burden and workflows based on AI allocate the workload to the available resources.

ServiceNow GRC leverages the use of AI to enhance decision-making through real-time governance strategy. Real-time reporting tools based on AI provide accurate compliance and risk numbers. Machine learning algorithms track governance patterns and businesses are able to introduce compliance in advance. Automated auditing ensures compliance to the needs of diverse regulation at minimum operational cost [11]. Response to compliance risks through automation based on AI reduces the compliance penalty burden. Ethical issues in terms of bias and transparency in decision-making are issues faced by businesses. Addressing the issues builds trust in governance solutions based on AI and the integration of Generative AI into ServiceNow GRC maximizes compliance efficiency and the effectiveness of organizational governance.

Literature Gap

Existing research does not include practical studies evaluating the real-world impact of Generative AI on governance, risk, and compliance procedures inside ServiceNow GRC. Most studies focus on theoretical advantages rather than assessing the efficiency of AI-driven automation in decreasing compliance concerns. There is limited study on the openness, accuracy and trustworthiness of AI-powered governance systems in regulatory decision-making and compliance enforcement.

METHODOLOGY

The research employs a ***positivist philosophy*** ethic to ensure impartiality and dependability in examining the function of Generative AI in ServiceNow GRC. Positivist philosophy places great importance on quantifiable facts and statistical evidence and the research is fit to assess governance frameworks in the

light of AI [12]. It provides the means to test the evidence-based assumptions from the respondent's point of view in the use of compliance and the management of risks with AI. This research provides findings based on facts and not interpretations, and the research validity is enhanced. A ***Deductive approach*** is used to test theoretical assumptions about governance, compliance, and control in the case of AI. Deductive approach helps to test the prevalent theories in the light of real-life occurrences in the governance of AI [13]. It helps to test the hypothesis systematically, and gives a rational structure to the testing of the effect of automation with AI in compliance precision and decision-making efficiency. It helps to derive inferences from established theories and test them in the light of findings from surveys.

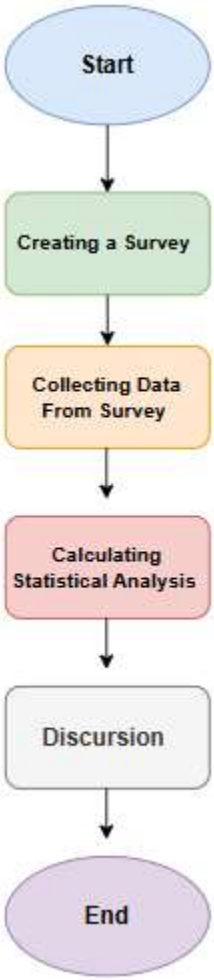


Fig 3: Methodology

The study uses ***primary research*** to gather first-hand opinions from professionals that are aware of the use of AI-based compliance in ServiceNow GRC. The use of primary data gives the researcher the latest and most current opinions about the use of AI in governance models [14]. ***A quantitative survey analysis*** aims to assess the effect of Generative AI in compliance efficiency, transparency and governance trust processes. The research uses ten questions, and there are two questions focusing on the demography and eight close-ended questions, each scored in a five-point Likert scale. 30 participants are included, and the responses are in the form of numerical data, making them easily manageable. The structured research provides objective measurement of the effect of AI in the use of the ServiceNow GRC leading to evidence-based findings and actionable recommendations.

DATA ANALYSIS

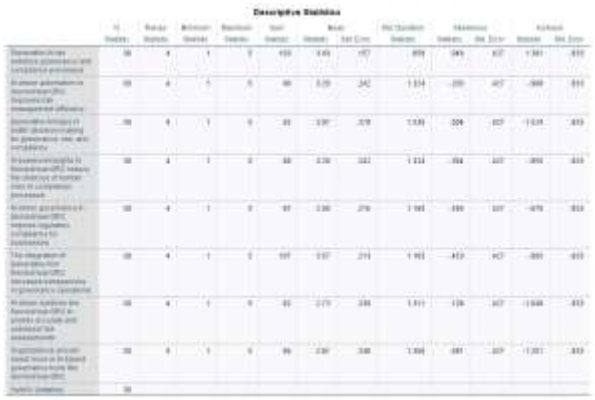


Fig 4: Descriptive Analysis

The mean scores are 2.73 and 3.57, reflecting differing perceptions about governance and compliance using AI. The score 3.57 implies consensus about the transparency function using AI. The lowest score 2.73 implies concerns about the precision in the use of AI in the determination of risks. The standard deviations are 0.858 and 1.530, reflecting differing dispersions in the opinions. Higher standard deviation scores reflect greater variability in the responses. The scores in terms of the skewness are -0.595 and 0.046, reflecting minimum asymmetry in the responses. The scores in terms of the kurtosis are -1.524 and 1.391, reflecting the differing pawedness in the response distributions in the different governance through the use of AI.

Statistics

Gender

N	Valid	30
	Missing	0

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	53.3	53.3	53.3
	2	13	43.3	43.3	96.7
	3	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Fig 5: Frequency table of Gender

The frequency distribution provides the distribution by gender among the 30 participants. Group 1 comprises 16 participants (53.3%), Group 2 comprises 13 participants (43.3%) and Group 3 comprises 1 participant (3.3%). This implies strongly bimodal distribution by gender in the sample, despite thin representation from the third group. Future research can examine the descriptors involved in the grouping by gender.

Statistics

Age group

N	Valid	30
	Missing	0

Age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	16.7	16.7	16.7
	2	4	13.3	13.3	30.0
	3	15	50.0	50.0	80.0
	4	3	10.0	10.0	90.0
	5	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

Fig 6: Frequency table of Age group

The dataset comprises 30 participants and all responses are real and none are missing. The most frequent (3) holds 50.0% (15 participants) in the sample. The lowest (youngest) (1) holds 16.7% (5 participants) and the oldest (5) holds 10.0% (3 participants). The total up to the third group is 80.0% and so the majority of participants are in younger brackets. The distribution is balanced and narrowly skewed in the younger participant's direction. The composition suggests the findings in terms of the governance of AI are indicative of younger participants' attitudes to compliance in the area of ServiceNow GRC.



Fig 7: Correlational Analysis

The correlation matrix also tested the relationships between the use of AI in ServiceNow GRC and various governance outcomes. A significant, positive correlation ($r = 0.343$, $p < 0.063$) between less human error and AI-driven insights did exist. The impact of Generative AI in decision-making positively and moderately correlated to governance, risk, and compliance ($r = 0.319$, $p < 0.086$). The use of Generative AI in ServiceNow GRC only correlated weakly to greater transparency ($r = 0.056$, $p < 0.768$). The rest of the other correlations are non-significant at the conventional .05 level and larger populations can reveal other significant relationships.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.122[a]	.015	-.058	1.361

a. Predictors: (Constant), AI-powered insights in ServiceNow GRC reduce the chances of human error in compliance processes, Generative AI can enhance governance and compliance processes

ANOVA[a]

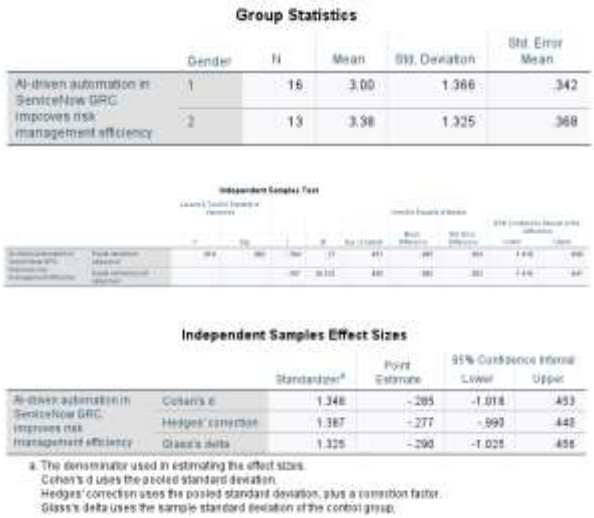
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.762	2	.381	.206	.815[b]
	Residual	50.038	27	1.853		
	Total	50.800	29			

a. Dependent Variable: AI-driven automation in ServiceNow GRC improves risk management efficiency

b. Predictors: (Constant), AI-powered insights in ServiceNow GRC reduce the chances of human error in compliance processes, Generative AI can enhance governance and compliance processes

Fig 8: Regression Analysis

The regression model also tested the impact of the Generative AI and the AI-driven insights on the efficiency in the automation-based risk management. The point at the beginning in the efficiency in the automation-based risk management, the point represented by the constant ($\beta = 3.212$, $p < 0.008$), is the point at which the predictors are zero. The Generative AI ($\beta = 0.106$, $p = 0.728$) and the AI-driven insights ($\beta = -0.118$, $p = 0.553$) did not significantly predict the efficiency in the automation-based risk management. The standard coefficients reveal the predictors to be having minimum impacts. This suggests the predictors in this model fail to significantly describe the variations in the efficiency in the automation-based risk management.



Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
AI-driven automation in ServiceNow GRC improves risk management efficiency	1	16	3.00	1.366	.342
	2	13	3.38	1.325	.368

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	Upper
AI-driven automation in ServiceNow GRC improves risk management efficiency	Cohen's d	1.348	-.285	-1.018	.453
	Hedges' correction	1.387	-.277	-.993	.448
	Glass's delta	1.325	-.290	-1.025	.456

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

Fig 9: T-test

The independent t-test between the genders did not produce significant differences in the efficiency in the use of the AI in the handling of risks. Effect size calculations offer additional explanation and large effect sizes are indicated by Cohen's d (1.348), the use of Hedge's correction (1.387), and Glass's delta (1.325). The effect size provides the impression of having a great effect despite the t-test finding. The vast confidence intervals (-1.018 to .453) suggest imprecision in the effect size estimators. The imprecision most likely comes from the use of a small sample and the size of the sample can be included in the explanation of the effect size.

FUTURE DIRECTIONS

Future research should use larger populations to increase the statistical power in the compliance and governance examination through the employment of AI. Long-term research can research the emerging impact of AI in governance efficiency. Industry-specific applications of AI in governance can provide specialized research findings [15]. Future research can assess the trust and ethics in decision-making through the employment of AI. Comparative research between the employment of AI and the employment of conventional governance can provide detailed research findings in the improvement in compliance efficiency [16]. The research into the model of integration between humans and AI in compliance could enhance governance accuracy and the efficiency in the management of risks.

CONCLUSION

Generative AI also holds the promise to augment governance, risk and compliance in ServiceNow GRC. The evidence suggests intermediate support in the area of transparency by the use of AI, and the concern about the precision in the evaluation of risks. Decision-making and minimization in errors are improved through automation by the employment of AI and compliance to regulation is not significantly improved. The study indicates that, while Generative AI shows potential, more research into its influence on governance efficiency is needed.Future research can focus on AI bias, morality, and industry-specific regulatory applications in order to improve governance efficiency.

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