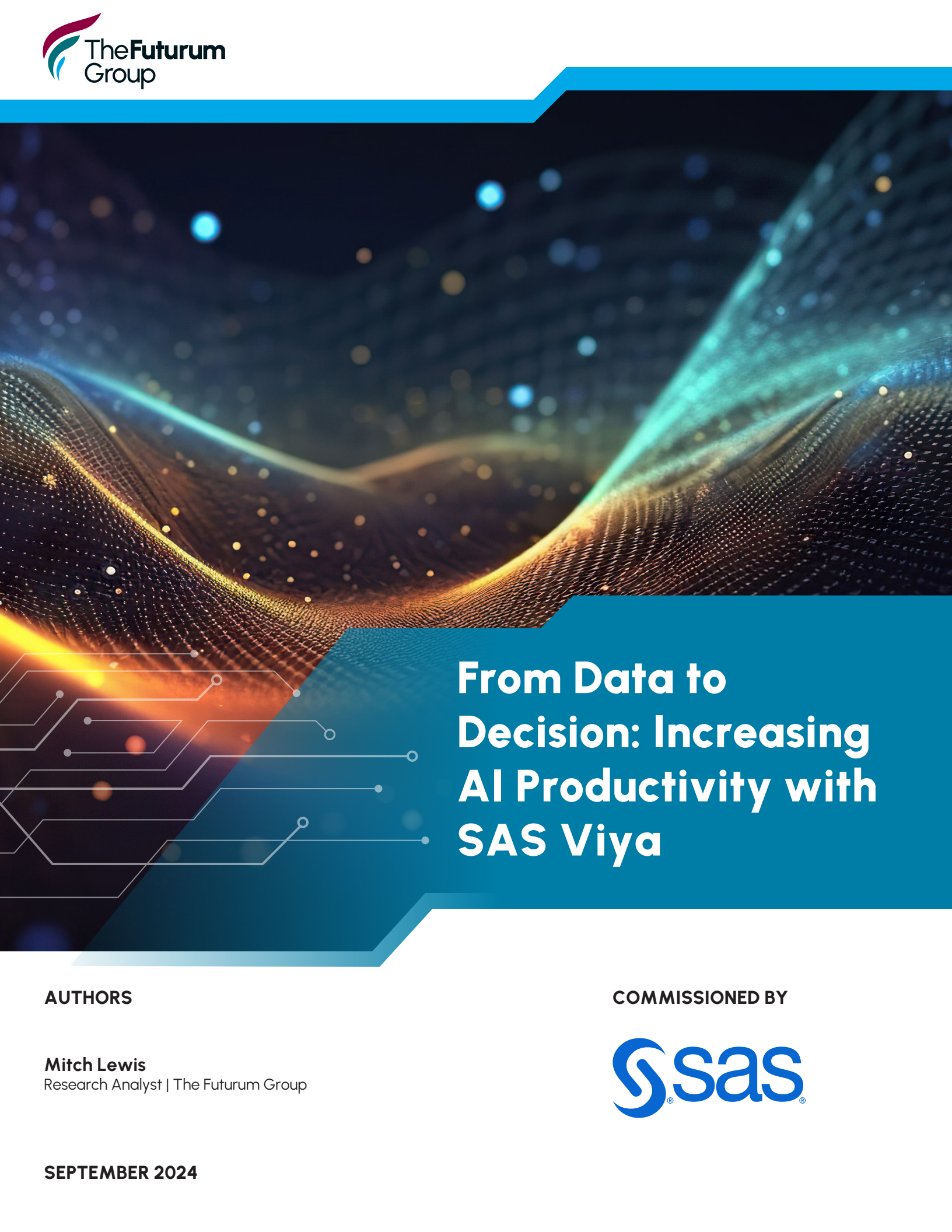




From Data to Decision: Increasing AI Productivity with SAS Viya

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Productivity Challenges in the Data and AI Life Cycle – Complexity, Tools, and Resources

Modern organizations across industries are increasingly data-driven, using data to guide decisions, provide strategic insights, develop new products, and drive innovation. Accelerating the journey from data to decisions enables companies to bring their products to market more quickly, adapt to market conditions with greater agility, reduce operational costs, and better respond to customer needs. By leveraging data and AI, organizations can ultimately boost competitiveness and drive cost efficiencies.

The end-to-end process of transforming data to decisions is known as the data and AI life cycle. The life cycle typically involves three core phases – managing data, developing models, and deploying insights. These steps form an ongoing, iterative process requiring collaboration among Data Scientists, Data Engineers, and MLOps Engineers. Increasingly, additional stakeholders such as Business Analysts or Ethics Specialists may also be required, furthering the need for effective collaboration.

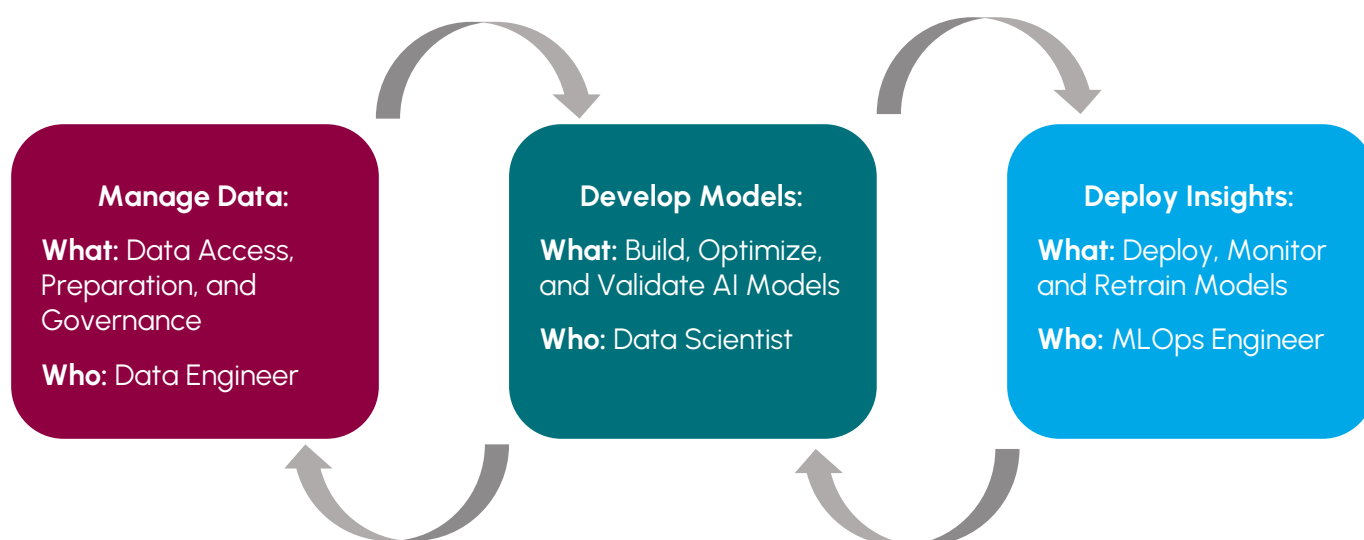


Figure 1: The Data and AI Life Cycle

The tasks and team productivity involved throughout the data and AI life cycle are commonly hindered by the time, complexity, and resources required. Each stage of the data and AI life cycle brings about unique challenges, often requiring significant effort, complex tools, and teams of expert data professionals. Overcoming these obstacles can significantly enhance productivity, driving faster decisions, innovation, cost savings, increased revenue, and competitive advantages. To address these challenges, organizations have turned to various approaches, including both commercial and non-commercial data and AI platforms. While non-commercial tools, based on open source technologies, can provide significant functionality, they often require considerable expertise to implement and most importantly manage. Commercial platforms typically leverage the cloud to enhance collaboration and reduce management requirements, while providing built-in features and automation to streamline the life cycle. While there are many data and AI platforms available in the market, their functionality and overall impact on productivity vary.

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Achieving 4.6x More Productivity with SAS®Viya®

To measure the impact that data and AI platforms have on productivity throughout the data and AI life cycle, The Futurum Group conducted a hands-on evaluation of three distinct data environments – SAS® Viya®, a competitive commercial data and AI platform, and a non-commercial approach where various popular open source technologies were used. The evaluation was achieved by completing an end-to-end customer churn prediction analysis, a common use case relevant to many industries, in each environment. Testing was completed by three Futurum Group analysts designated to specific personas – a Data Engineer, a Data Scientist, and an MLOps Engineer – responsible for completing tasks aligned with the three phases of the data and AI life cycle. Additionally, a fourth analyst evaluated each platform via a Business Analyst persona to measure if tasks were achievable by a non-technical resource.

Results of the study showed that SAS Viya was found to improve productivity at each stage of the data and AI life cycle. Key to the productivity advantage of SAS Viya was a measurement of engineering time spent completing each task:

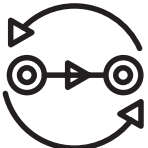
	SAS Viya vs Commercial Platform	SAS Viya vs Non-Commercial	Average
 End-to-End Data and AI Life Cycle	4.25x MoreProductive	5x MoreProductive	4.6x MoreProductive
 Data Engineering Tasks	16x MoreProductive	16x MoreProductive	16x MoreProductive
 Data Scientist Tasks	3x MoreProductive	4x MoreProductive	3.5x MoreProductive
 MLOps Engineer Tasks	4.5x MoreProductive	4.5x MoreProductive	4.5x MoreProductive

Figure 2: Data and AI Life Cycle Productivity Overview

"Testing showed that an end-to-end data and AI life cycle can be achieved with more than 4x greater productivity in SAS Viya than in competitive solutions. The productivity gains found in SAS Viya not only ease the burden placed on data and AI teams, but they can lead to significant cost savings."

In addition to time savings, The Futurum Group analysts found several key productivity advantages while evaluating SAS Viya compared to the competitive solutions:

Completion of the data and AI life cycle with zero coding required

- Enables participation from users of all technical backgrounds
- Lowers the learning curve for complex data and AI tasks
- Eliminates reliance on complex programming libraries

Greater achievability by non-technical resources

- Of the total data and AI life cycle, 86% was found to be achievable by a Business Analyst – a 30% greater completion rate than the next best alternative approach
- Utilization of less-experienced resources enables greater staffing flexibility and access to a wider talent pool
- Unlocks time for expert data practitioners to focus on new innovations, including GenAI enhanced workflows

Lower complexity throughout the entire data and AI life cycle

- Of the tasks completed in SAS Viya, 96% were considered "Low Complexity" as determined by The Futurum Group Analysts. The remaining 4% were considered "Medium Complexity," and no task was considered "High Complexity"
- Alternatively, only 50% of tasks in the competitive commercial platform and 30% of tasks in the non-commercial platform were considered "Low Complexity," while 17% were considered "High Complexity" in both solutions
- Lowering complexity enables greater efficiency in completing tasks and lowers the learning curve to onboard new users

When compared to the non-commercial approach, SAS Viya significantly reduced the time and complexity of managing software, infrastructure, and dependencies of open source packages. In addition, SAS Viya was found to have several functionality advantages over the competitive commercial platform, including greater built-in visualization and automation capabilities, which enabled productivity gains at each stage of the data and AI life cycle. For businesses, these productivity gains translate to significant time and cost savings.

Along with reducing the overall time and complexity of completing the data and AI life cycle, several other productivity-boosting benefits were noted when evaluating SAS Viya. The platform was found to be well suited for collaboration between each persona, enabling a smooth transition between each stage of the end-to-end life cycle. While all tasks could be completed without coding requirements, it was noted that the platform offered flexibility to complete tasks with SAS, Python, and R code as desired. This flexibility allows non-coders to easily complete tasks, while simultaneously enabling technical experts to utilize the tools they are most familiar with.

SAS Viya was additionally found to be capable of integrating and orchestrating new Generative AI tools to further drive productivity and innovation. The ability to easily integrate GenAI and large language models (LLMs) can provide even greater productivity benefits by optimizing processes and enabling more efficient and intelligent decision-making. The inclusion of GenAI future-proofs SAS Viya as a data and AI platform that is well equipped to enable data practitioners to take on the most innovative data and AI solutions.



Final Thoughts – Productivity in Data and AI Matters

For data-driven organizations, the productivity of their data and analytics teams is vital to core business practices. The tools utilized by these teams can make a significant impact. The current market landscape provides organizations with a variety of approaches, ranging from non-commercial tools to commercial data and AI platforms with various features and capabilities.

This study evaluated the productivity differences in completing the data and AI life cycle across three distinct data and AI platforms and found that SAS Viya presents significant productivity advantages over both commercial platforms and non-commercial solutions. Overall, SAS Viya was found to enable 4.25x greater productivity throughout the end-to-end data and AI life cycle compared to the next best solution tested. In addition, SAS Viya was found to be an intuitive platform that significantly lowers the learning curve for new users and enables greater productivity of non-technical users.

These results, combined with the previous Futurum Group testing that found SAS Viya to provide a 30x performance increase over competitive solutions, demonstrate that SAS Viya offers significant overall advantages. The combination of increased productivity and faster computation compound to provide a highly efficient platform capable of unlocking significant value for data-driven organizations.

The selection of an optimal data and AI platform is crucial for enabling organizations to efficiently leverage the data and AI life cycle to achieve their business goals. This study found SAS Viya to provide a data and AI platform that combines strong technical capabilities with an intuitive interface capable of transforming data to decisions quickly and efficiently.

Please [click here](#) to download the full Lab Insight Report for more insight into The Futurum Group's productivity study.

Important Information About this Report

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