

The background image shows a person in a dark suit shaking hands with a large, silver, humanoid robot. They are standing in front of a modern glass skyscraper. The scene is set in a city environment with other people walking in the background. The overall tone is professional and futuristic.

# A.I + Agile: Lessons from a Scrum Master

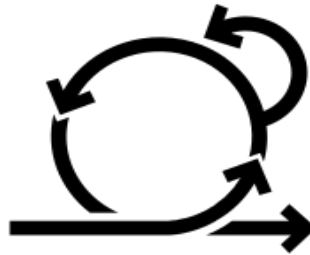
By  
Oscar-Timothy Okolo

## Core of the presentation



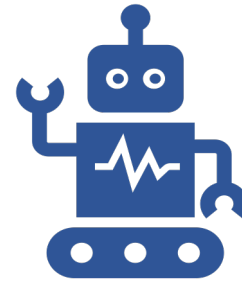
Data

+



Agile

+



A.I.

## Your Presenter



**Oscar-Timothy Okolo**  
Chief Improvement Officer  
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**Oscar-Timothy Okolo** is a distinguished Agile practitioner with a robust data-driven approach. His expertise is underpinned by a deep commitment to Lean Six Sigma principles, evidenced by his black belt and green belt certifications. Oscar currently excels in the role of Scrum Master, specializing in consultancy within the energy sector. His professional journey is marked by a broad spectrum of experiences across diverse industries, including finance and healthcare.

Driven by a fervent passion for fostering success, Oscar founded Kaizen Vibes. This venture is dedicated to cultivating environments of continuous improvement by integrating customized agile practices to suit the specific needs of various organizations, all while propagating the agile methodology.

Academically, Oscar is well-founded with a background in Computer Science, complemented by a Master's degree in Health Informatics and Data Science. He has contributed to numerous projects in varying capacities, including significant roles on the product side. Outside of his professional endeavors, Oscar enjoys engaging in chess and delving into new books, reflecting his continuous pursuit of knowledge and personal growth.

**Certifications:** PMI-ACP, PMP, PSM I, PSM II, PSPO, CSM, A-CSM, CSP-SM, LSSGB, LSSBB, S6SM, Jira Project Admin, SAS Advanced programmer

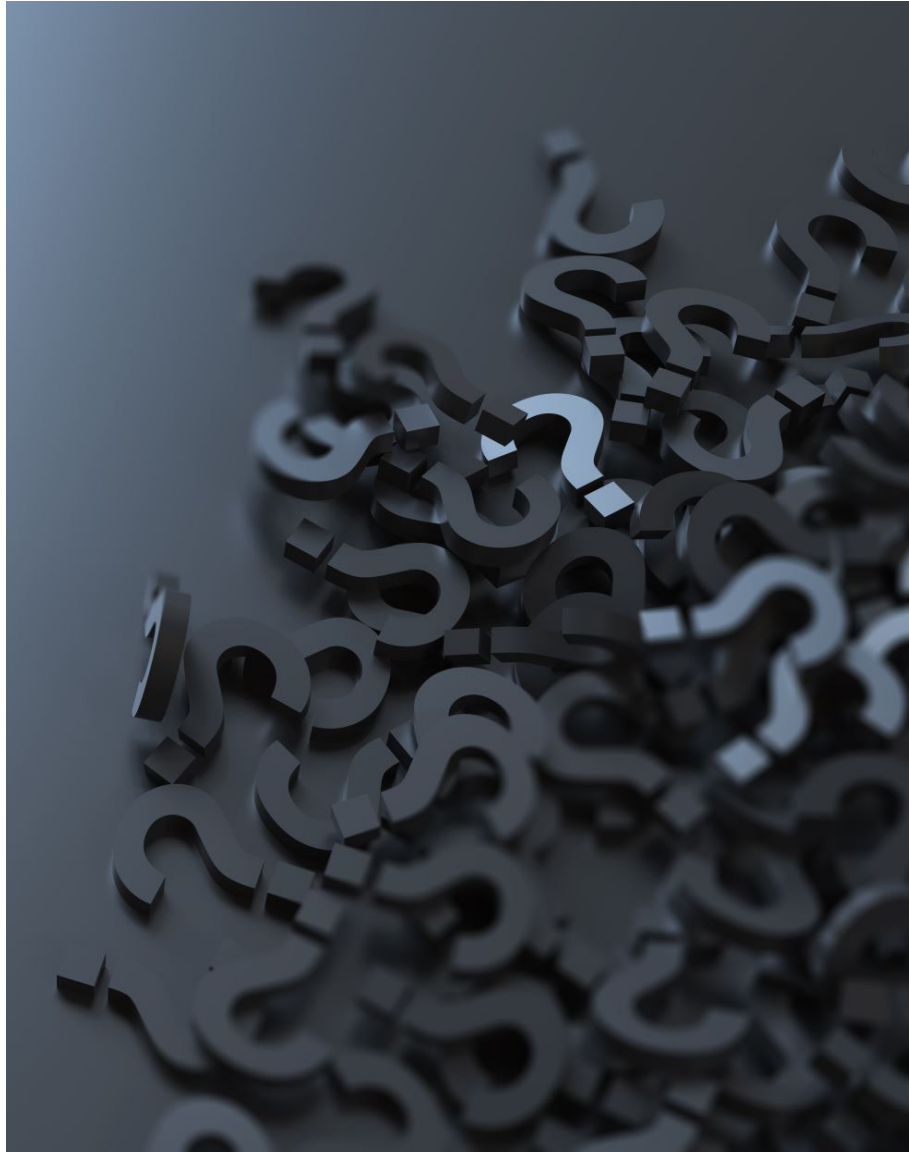
# Recap of Agile

Agile is a methodology for project management and software development that emphasizes flexibility, collaboration, and customer satisfaction.



## Key Principles:

- **Customer Collaboration over Contract Negotiation:**
  - Engage with customers frequently to understand their needs and adjust plans accordingly.
- **Responding to Change over Following a Plan:**
  - Be adaptable to changes even late in development, ensuring the final product meets the current needs.
- **Working Software over Comprehensive Documentation:**
  - Prioritize delivering functional software that can be improved upon iteratively.
- **Individuals and Interactions over Processes and Tools:**
  - Foster effective communication and teamwork to enhance productivity and problem-solving.



# Agenda

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1. Objectives
2. Methodology: Data Collection and Analysis
3. Key Insights and AI Recommendations
4. Live Experiment
5. Challenges and Limitations of AI Integration
6. Concluding Thoughts: Implications for Agile Practitioners and The Future of AI in Agile
7. Q&A Session

# Objectives



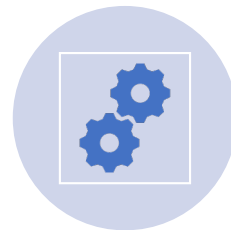
Understand how to interact directly with team data



Impact of these insights and practical applications



Demo with live data and discuss the insights generated by the A.I



Explore the potential of AI as a tool to support, rather than replace, project managers and Scrum Masters.

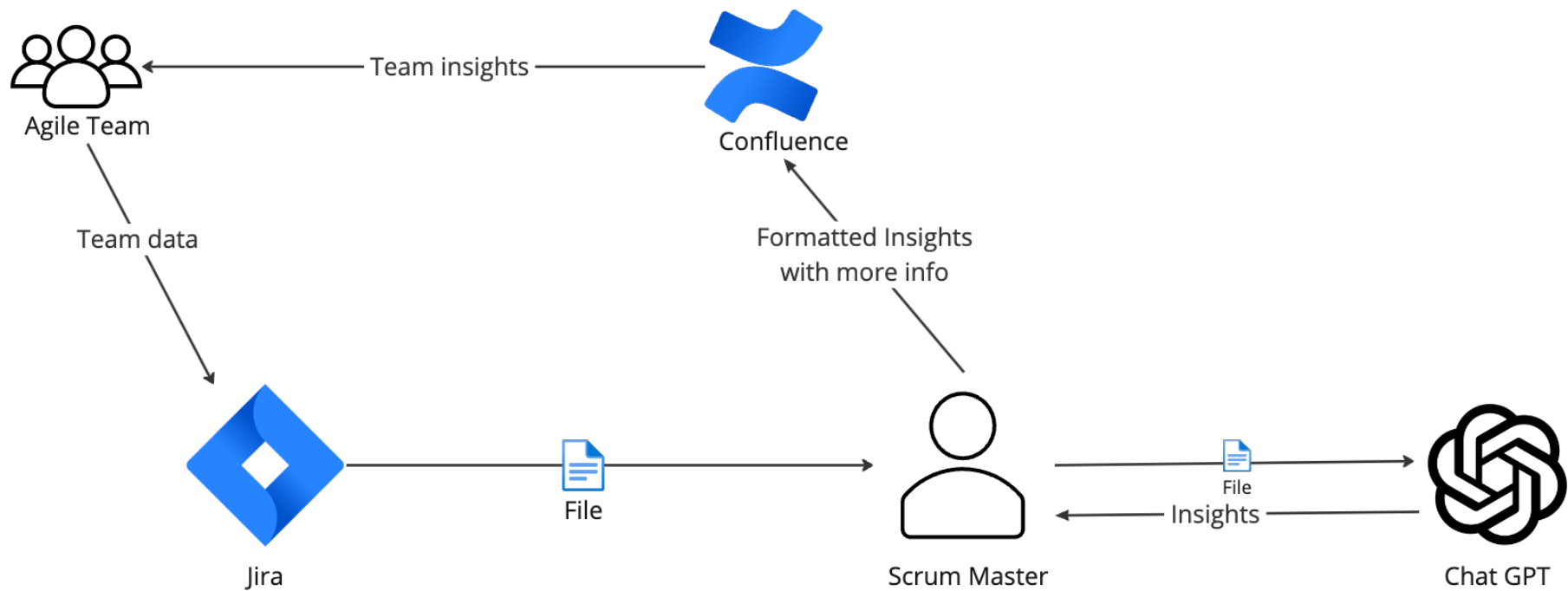


# Data Collection

- Summary
- Issue Type (User Story, Task, Bug)
- Status (To-do, In-Progress, Done)
- Assignee
- Creator
- Fix version
- Component
- Sprint
- Comments
- Story points
- Status changed date
- Etc.



# Data Collection Flow





# The Team

- **Framework Utilized:** The team adopts the Scrum Framework within Agile practices.
- **Team Structure:** Composed of three teams, all operating on the same schedule.
- **Project Focus:** Each team contributes to the same product by developing specific features and addressing bugs.
- **Team Dynamics:** These are long-established teams that have been collaborating effectively for an extended period.
- **Performance:** Known for consistently exceeding their commitments and successfully meeting sprint goals, due to a strong understanding of Scrum and Agile methodologies.






## Insights and A.I. Recommendation






# Interaction 1



Command	Response
Analyze the data	<ul style="list-style-type: none"><li>• Distribution of Issue Types<ul style="list-style-type: none"><li>○ Tasks, Bugs, and User stories make up X, Y, and Z% of the work</li></ul></li><li>• Status of issues<ul style="list-style-type: none"><li>○ The % of work done, still in-progress, and To-do at the end of the Sprint</li></ul></li><li>• Project Activity<ul style="list-style-type: none"><li>○ Count of issues tracked</li></ul></li><li>• Time Taken for Status Change<ul style="list-style-type: none"><li>○ Could not be calculated</li></ul></li></ul>



## Interaction 2

Command	Response
This data is for one Sprint. As a scrum master, what would you advise each team during a retro?	<ul style="list-style-type: none"><li>• General Team<ul style="list-style-type: none"><li>○ Celebrate the Completion Rate</li><li>○ Reflect on Prioritization</li></ul></li><li>• For Bugs<ul style="list-style-type: none"><li>○ Effective Troubleshooting</li><li>○ Prevention over cure</li></ul></li><li>• For features<ul style="list-style-type: none"><li>○ User-Centric Focus</li><li>○ Agile Best Practices</li></ul></li><li>• All Teams<ul style="list-style-type: none"><li>○ Collaboration and communication</li><li>○ Learning from Removed/deleted/canceled issues</li><li>○ Backlog management</li><li>○ Continuous Improvement</li></ul></li></ul>

## Interaction 3

Command	Response
What challenges are the team facing	<ul style="list-style-type: none"><li>• High Volume of Bugs (32%)<ul style="list-style-type: none"><li>○ There might be gaps in the development or testing processes leading to a high number of bugs.</li><li>○ Technical Debt</li></ul></li><li>• Canceled/Removed Issues (7.2%)<ul style="list-style-type: none"><li>○ A notable percentage of tasks or stories are being Removed. This could suggest:<ul style="list-style-type: none"><li>▪ Changing Priorities</li><li>▪ Misalignment with Goals</li></ul></li></ul></li><li>• Tasks and Stories Distribution<ul style="list-style-type: none"><li>○ With tasks making up 44% and stories 19.2% of the workload, it's important to consider:<ul style="list-style-type: none"><li>▪ Workload Balance</li><li>▪ Clarity and Scope</li></ul></li></ul></li><li>• In Progress and Backlog (5.6% each)<ul style="list-style-type: none"><li>○ A small portion of issues is in progress or To-do, which might highlight:<ul style="list-style-type: none"><li>▪ Sprint Planning: Issues in these categories might indicate challenges in sprint planning</li><li>▪ Resource Allocation</li></ul></li></ul></li><li>• Communication and Collaboration<ul style="list-style-type: none"><li>○ Given the single project focus, but with tasks spread across different areas (Tasks, Bugs, Stories), the team might face:<ul style="list-style-type: none"><li>▪ Silos and Handoffs: Potential issues in collaboration between different roles or sub-teams</li><li>▪ Information Sharing: There could be challenges in effectively sharing progress, updates, and blockers across the team, impacting overall productivity.</li></ul></li></ul></li></ul>

A close-up, slightly blurred image of a clock face. The clock has a white face with dark blue numbers and hands. The hands are dark blue, and the second hand is a thin orange line. The text "Demo Time" is overlaid in the center in a white, sans-serif font. The clock is set to approximately 10:10.

Demo Time



# Challenges and Limitations of AI Integration

**A.I. vs Reality**





# What did A.I. Do right?

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- **Importance of Statistics:** Emphasizing the relevance of statistics when assessing the team's overall performance.
- **Overlooked Metrics:** Identifying potentially overlooked metrics that provide valuable insights.
- **Insightful Recommendations:** Offering practical advice on often-missed aspects, such as the rate of ticket removal.
- **Avoiding Common Mistakes:** Providing guidance on common anti-patterns to enhance team efficiency and effectiveness.



# Where Does Reality kick in?

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- **Assessing Statistics:** Do the positive statistics truly capture the full picture of the team's performance?
- **Assumption in Advice:** Noting that the advice provided to teams is often based on many assumptions.
- **Lack of Context:** Highlighting that there is insufficient context to form deeper insights.
- **Repetitive Advice:** Pointing out that the advice tends to be generic and repetitive, lacking detail.
- **Ignoring Specifics:** Criticizing the failure to account for unique team setups and custom fields.



## Concluding Thoughts: Implications for Scrum Masters & The Future of AI in Agile



# How to Apply This Information

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- **Enhancing Data Collection:** Gradually adding more data over time to improve insights.
- **Streamlined Reporting:** Making sprint reports for leadership more straightforward and accessible.
- **Developing KPIs:** Gaining deep insights into team metrics to create effective Key Performance Indicators (KPIs).
- **Bottleneck Identification:** Detecting potential bottlenecks in processes.
- **Facilitating Discussions:** Encouraging more conversations about topics such as increased bug rates and quality improvement strategies.

# The Future of AI in Agile



- **Augmentation vs. Replacement:** AI is set to enhance, not replace, the roles of human leaders in Agile environments.
- **Enhanced Data Analytics:** The potential for AI to deepen insights with superior data analysis capabilities.
- **Adaptive Learning:** AI's ability to evolve by learning from feedback and changes within Agile practices.
- **Ethical and Practical Considerations:** Considerations on the ethical use and practical challenges of AI in collaborative settings.
- **Future Integration Scenarios:** Exploring how AI might further integrate into Agile methodologies, reshaping practices and frameworks.



Q&A



The image features a dark gray background with a large, white circle centered horizontally. The circle is defined by a thin, light gray border. The word "Appendix" is written in a black, sans-serif font, centered within the white circle.

# Appendix



## Exporting Data from Jira

### >> Using JQL

The screenshot shows the Jira 'Your Project' Issues page. At the top, there's a navigation bar with 'Projects', 'Filters', 'Dashboards', 'Teams', 'Plans', 'Apps', and a 'Create' button. A search bar is on the right. Below the navigation bar, the page title is 'Your Project' and 'Issues'. A JQL query is entered in the filter box: `project = "Your Project" AND Sprint = "Your Sprint" ORDER BY created DESC`. To the right of the query box, there's a dropdown menu for 'Export issues' with options 'Print list' and 'Print details'. Below the query box, there's a 'Created' dropdown and a 'Save filter' button. On the right, there are buttons for 'Go to all issues', 'LIST VIEW', 'DETAIL VIEW', and a '1 of 1000+' indicator.

- Navigate to the issues section
- Input JQL query
- Select Export issues
- Select Export issues CSV (all fields) or (my defaults)

### >> Using Basic

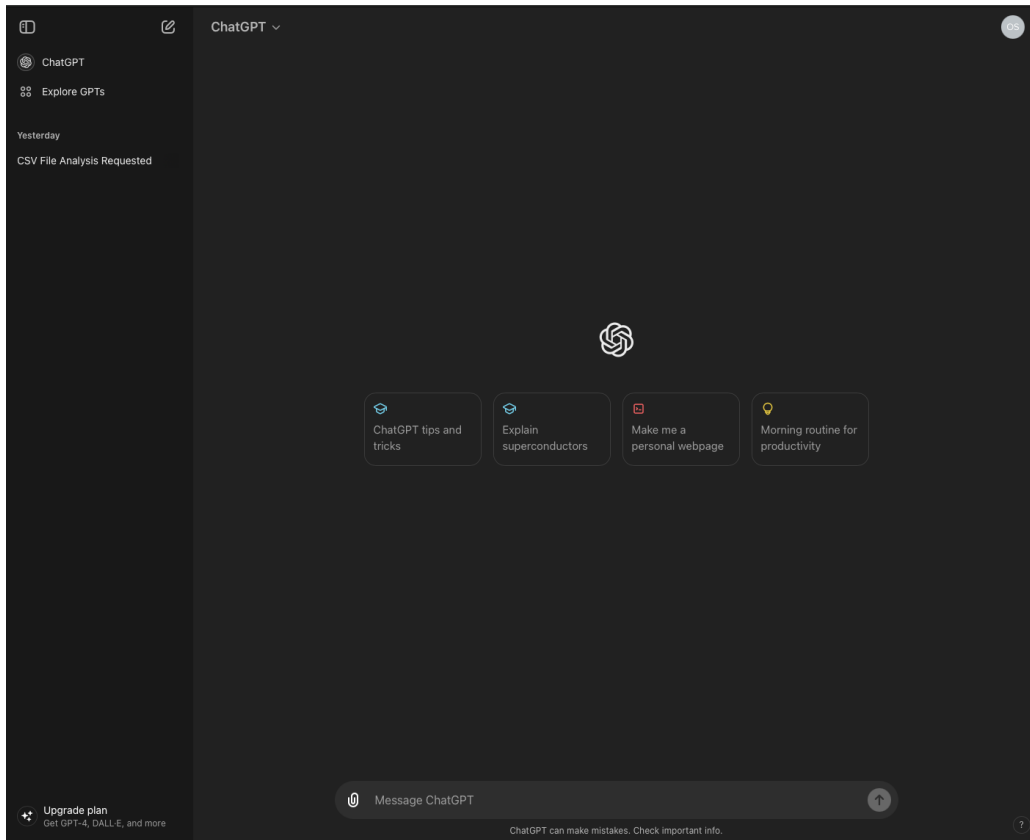
The screenshot shows the Jira 'Your Project' Issues page. At the top, there's a navigation bar with 'Projects', 'Filters', 'Dashboards', 'Teams', 'Plans', 'Apps', and a 'Create' button. A search bar is on the right. Below the navigation bar, the page title is 'Your Project' and 'Issues'. A 'Search issues' box is on the left. Below it, there are filters for 'Project', 'Type', 'Status', 'Assignee', and 'More +'. To the right of the filters, there's a 'Reset' button and a 'Save filter' button. On the right, there are buttons for 'Go to all issues', 'LIST VIEW', 'DETAIL VIEW', and a '1 of 1000+' indicator. A dropdown menu for 'Export issues' is open, showing 'Print list' and 'Print details' options.

- Navigate to the issues section
- Input select the project you need
- Select More > Sprint
- Select Export issues CSV (all fields) or (y defaults)

# Export data to CSV / Excel (Other Resources)

- MS Project: <https://www.wps.com/blog/how-to-export-ms-project-data-to-excel-a-comprehensive-guide/>
- Asana: <https://blog.asana.com/2014/09/export-to-csv/>
- Azure DevOps: <https://learn.microsoft.com/en-us/azure/devops/boards/queries/import-work-items-from-csv?view=azure-devops#export-list-as-a-csv-file>
- Monday: [https://support.monday.com/hc/en-us/articles/360000219209-Import-export-with-Excel#Export groups or items to Excel](https://support.monday.com/hc/en-us/articles/360000219209-Import-export-with-Excel#Export_groups_or_items_to_Excel)

## Uploading data to ChatGPT



Attach the CSV data files



Upload the file



Input the commands

*As a Scrum master, ...*

# Extending AI Insights Across Agile Roles

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- **Product Owners:**

- Product owners can input specific data such as release backlogs, business requirement documents (BRDs), and product backlogs to extract meaningful insights.
- AI algorithms analyze customer feedback and market trends to help prioritize the product backlog, ensuring focus on features with the highest business impact.

- **Developers:**

- AI analyzes past code repositories to identify patterns and suggest optimizations, potentially reducing bugs and improving code quality.
- Using historical project data, AI predicts potential roadblocks and suggests best coding practices.





## Sample Interactions for Traditional Project Managers



Project Status:

- "What is the current status of each project phase?"

Risk Analysis:

- "Identify potential risks in the next project phase."

Resource Allocation:

- "How can we optimize resource allocation for the remaining phases?"

Performance Metrics:

- "What are the key performance metrics for each project phase?"

Deadline Tracking:

- "Are we on track to meet all project milestones and deadlines?"

Issue Resolution:

- "What are the most common issues causing delays in the current phase?"
- 