

Delivering AI-Powered Solution for Startup HR Challenges with EngineerD: OnboardR and SidekickR Streamlines New Hire Integration Using Microsoft 365 A Professional Readiness Experiential Program (PREP) Project Effort

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---- Client Testimonial ----

“The company has had difficulty systemizing the onboarding process involved with new hires and due to the inexperience of most of the staff, handbooks and SOPs alone were not effective to reduce the amount of time for business developers like the CEO to personally provide access and training to staff. This extra work has led to tremendous losses in revenue from sales, stress and misuse of operational expenses. The student MIS team was able to sensitize themselves to the complexity of this issue within weeks of experiencing onboarding in a small company, studying business practices, learning the critical software used and interviewing staff. Their ability to perform market research and compare how industry is solving this issue, led to a credible solution that they designed using AI powered automation. This project and the user experience is one of the few projects where the finished product is so well integrated to the business operations that I genuinely see the company using this AI agent for onboarding tasks immediately this year to reduce the workload, augment HR work and continue to operate platforms like Teams seamlessly for collaboration. I see their work benefiting a lot of bootstrapped businesses that can't afford the labor and experience involved in extensive hiring much like the demands of DoD contracting. ”

- Rehan Mahmood | Founder, Chief Executive Officer, & Chief Solutioneer | EngineerRD

Introduction

In today's fast-paced startup environment, efficient onboarding is crucial for employee retention and productivity. However, many small and rapidly growing businesses lack the resources or formal procedures to deliver a consistent onboarding experience. According to Gallup (2017), only 12% of employees strongly agree their organization does a great job onboarding new hires, despite research showing that effective onboarding programs can boost retention by 69% over three years (Bauer, 2010).

Our PREP team assigned to work with EngineerRD was initially tasked with developing a sales-focused Copilot to streamline and automate sales processes and to help follow through with sales leads. However, an early prototype for an onboarding Copilot-created during a Microsoft Learn module stand-up resonated strongly with our CEO at EngineerRD. This meeting led to a complete project pivot: we shifted our focus entirely to building *OnboardR*, an automated onboarding solution powered by Copilot Studio, Power Automate, and the Office 365 Suite.

Business Challenge

The original project scope centered on creating a Sales Copilot to assist in lead management and sales enablement. For the first four to five weeks, our team conducted user interviews, developed requirements traceability matrices (RTMs), and mapped out sales workflows. However, EngineerRD's leadership recognized that onboarding inefficiencies posed a more urgent barrier to growth. With no dedicated HR staff, onboarding tasks fell to managers and IT, resulting in inconsistent processes, missed compliance steps, and a poor new hire experience.

The pivot to onboarding meant our team had to rapidly adapt, discarding weeks of prior work and quickly immersing ourselves in the unique pain points of employee onboarding. This shift required us to interview a different set of stakeholders, develop new RTMs, and design a solution that addressed both managerial and employee needs—all within a compressed timeline.

Activities Done to Address the Business Challenge

1. Rapid Reassessment and Stakeholder Alignment

- *Stakeholder Interviews:* We conducted new interviews with our CEO that deals with onboarding, and as many recent hires as we could to map the onboarding journey. During this process, we aimed to identify bottlenecks and gather requirements for both the employee- and manager-facing sides of the process. To restate, this process had to be executed extremely quickly, i.e., within a week since we had to make up for the lost time.
- *Redefining Requirements:* We rebuilt our Requirements Traceability Matrix (RTM) and the current state diagram from scratch, focusing on onboarding-specific needs such as compliance documentation, account provisioning, training completion, and new hire communication.

2. Solution Design: OnboardR and SidekickR

- *OnboardR (Employee-Facing)*: Built in Copilot Studio, this Copilot Agent guides new hires through onboarding tasks, provides access to resources, tracks progress, and answers common questions. Some of the most impressive features include:
 - Interactive menus (Prompt Zero) for easy navigation.
 - Adaptive cards for submitting HR requests and introduction posts.
 - Task tracker integration with Microsoft Planner.
 - Automated reminders for mandatory forms and training.
- *SidekickR Agent Flows (Manager/HR Automation)*: Using Power Automate, we automated backend processes for managers and IT, including:
 - Onboarding initiation via Microsoft Forms.
 - Automated document collection and e-signature with DocuSign and SharePoint.
 - Task assignment and tracking in Microsoft Planner.
 - Real-time notifications to managers via Teams when key milestones are completed.

3. Standard Operating Procedures and Documentation

- Developed comprehensive SOPs for both OnboardR and SidekickR, detailing step-by-step processes, roles, and responsibilities for managers, IT, and new hires.
- Created a Quick Reference Guide to help users navigate OnboardR's features and troubleshoot common issues.

4. Testing, Feedback, and Iteration

- Conducted pilot tests with real users to validate workflows, identify usability issues, and measure time savings.
- Incorporated feedback to refine agent conversations, streamline task flows, and improve integration between OnboardR and SidekickR.

Results & The Positive Impact

The transition to OnboardR yielded significant benefits:

- *Time Savings*: Managerial onboarding time dropped from 4–5 hours to just 30 minutes per new hire—a reduction of over 80%.
- *Consistency and Compliance*: Automated workflows ensured that every new hire completed required forms (e.g., I-9), training, and account setup, reducing the risk of compliance failures.
- *Improved New Hire Experience*: New employees reported greater clarity and confidence, with easy access to resources, clear task lists, and timely support.
- *Scalability*: The solution is designed for small businesses with limited HR resources, but is robust enough to support growth and remote onboarding.
- *Business Model Potential*: OnboardR is positioned for SaaS commercialization, with a tiered subscription model and plans for Azure Marketplace distribution.

These outcomes align with research showing that structured onboarding improves employee engagement, productivity, and retention (Bauer, 2010; SHRM, 2022).

Conclusion

Our project journey exemplifies the importance of adaptability and user-centered design in technology projects. The pivot from a sales-focused Copilot to an onboarding solution required our team to quickly reassess priorities, engage stakeholders, and deliver a product that met the most pressing business need. OnboardR now empowers EngineerRD and similar startups to onboard smarter, faster, and with greater consistency-freeing managers to focus on growth and innovation.

Looking forward, we plan to further enhance OnboardR with analytics, implement user feedback, and expanded training modules, making it a compelling solution for small and medium businesses seeking to professionalize their onboarding processes.

PREP Student Reflection

This opportunity was really engaging and had us learn many skills that will be beneficial for what we are to face in the business world. Being a part of this program was a game-changer that gave us a fast track into a real working environment that really challenged us and put us to the test while also elevating us to be the best of ourselves to accomplish the goals we were given. None of us had ever faced an opportunity to be challenged like this before.

Along our journey we met people who really inspired us and encouraged us as they motivated us to accomplish more than we had anticipated coming into the venture. They set out a goal for us to fulfill and guided us to build upon our own strengths and weaknesses to accomplish this mission as they not only saw the potential of our project, but also the potential that could be unfolded from within each and everyone of us. They gave us inspiration and encouragement to fuel that desire for us to learn and develop ourselves in an environment where we were completely out of our element and yet came out on top exceeding expectations.

This need for rapid and agile development required our personal skills to also reflect that premise. We saw our own potentials improve with each new task handed to us pushing us further and further outside of our comfort zones, and this only empowered us to work even harder beyond our limits. As here we stand at the end of this journey, triumphant.

We are all truly grateful to the EngineerRD team for everything they have done, and to Professor Brian Ngac and Rehan Mahmood for allowing us to take this opportunity and gain the experience of a lifetime to really prepare us for what is to come in our future careers. We also want to extend our gratitude to Coleman Early, our project manager and mentor throughout the semester. This was not just another class, but an expedition to truly see the peaks of our efforts pushed to the limits and brought forth to be witnessed by others to truly be inspired by what is to come from the next generation of learners.

References

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