ARTIFICIAL REQUIREMENTS INTELLIGENCE

FOR DIGITAL TRANSFORMATION PROJECTS

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ORCA INTELLIGENCE
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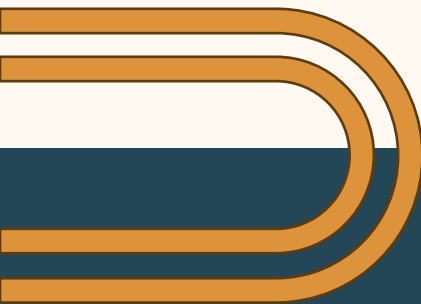# TABLE OF CONTENTS

MELISSA DALEY

INTRODUCTION

In the dynamic landscape of software development, the foremost challenge plaguing projects is the lack of clear, well-defined requirements. This fundamental issue is the root cause of various problems that critically hinder the success of software projects. Ambiguities in requirements can lead to a misalignment with client expectations, inefficient resource allocation, scope creep, overlooking of critical functionalities, misinterpretation of project goals, challenges in testing and validation, and an increased risk of project failure. The crux of these issues is that engineers often lack a comprehensive understanding of the exact needs and objectives, leading to software solutions that inadequately meet client requirements or fail to solve the intended problem.

Addressing this challenge, Orca Intelligence, leveraging a decade of expertise in the field, introduces Swiftly – an innovative AI-powered tool designed to revolutionize the initial stages of software development. Swiftly emerges from the Plan, Analyze, and Manage methodology, a unique approach developed by Orca Intelligence, ensuring that the complexities of requirement gathering are navigated with unprecedented efficiency and accuracy. Swiftly uncovers patterns and insights that might elude traditional human analysis by analyzing extensive data sets, offering a more complete and nuanced understanding of project requirements.

These capabilities enable Swiftly to anticipate potential challenges and changes in project requirements, drawing on a wealth of historical data. This foresight allows for proactive adjustments in project scope, ensuring that teams can concentrate on critical aspects of development, thereby mitigating risks and enhancing the likelihood of project success.

Through the integration of Swiftly, Orca Intelligence is at the forefront of ushering in a new era in software development, where AI-driven clarity in requirements sets the foundation for more successful, efficient, and client-aligned software projects.

METHODOLOGY

Orca Intelligence has meticulously crafted the Plan, Analyze, and Manage (P.A.M) process as the cornerstone of Swiftly's operational framework. Rooted in the principles of the Human-Centered Design and Engineering (HCDE) approach, P.A.M. encompasses three critical stages that form the backbone of our requirements framework. This robust structure is pivotal in guiding current operations and is strategically designed to enhance and feed the machine-learning models integral to our technology's future advancements.

Primarily applied in software development, the versatility of the P.A.M. process is one of its key strengths. Its adaptability allows it to be seamlessly tailored to various products and projects. This flexibility ensures that regardless of the domain or complexity of the product, the P.A.M framework remains an effective tool, fostering innovation and precision in our developmental endeavors. At Orca Intelligence, the P.A.M. process is more than just a methodology; it's a testament to our commitment to delivering excellence through a human-centered, analytical, and strategic approach.

- **Plan:** We set up the Behavioral Development Driven (BDD) framework to define the Epics, Features, and Scenarios for a new or existing roadmap. The planning step is ideal for identifying product development's scope, hours, and budget.
- **Analyze:** We use automation to generate detailed requirements based on details from the Planning phase. With the click of a button, our algorithmic-based tool, Swiftly™, generates data elements, sketches, scenarios, tasks, and validation messages.
- **Manage:** We use your BDD framework to manage change requests and avoid scope creep throughout the development process.
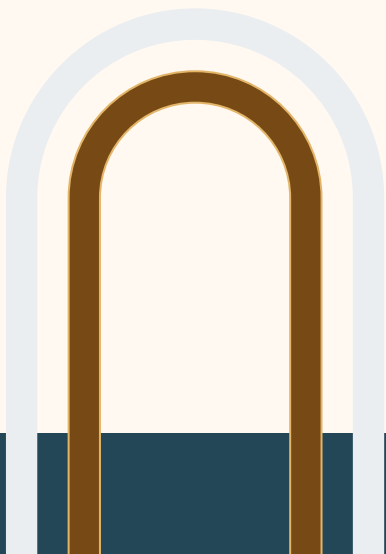
KEY FINDINGS

ACCELERATE REQUIREMENTS AND SCENARIO GENERATION.

.Swiftly significantly speeds up the process of generating requirements and scenarios, making the initial stages of software development more efficient.

CREATE SCENARIOS WITH A HUMAN-CENTERED FOCUS.

The tool emphasizes a human-centered approach in scenario creation, ensuring that the developed solutions are closely aligned with user needs and experiences.

### MINIMIZE RISK AND MAXIMIZE THE QUALITY OF SOFTWARE OR SYSTEM IMPLEMENTATIONS.

Swiftly aims to reduce potential risks associated with software or system development while concurrently maximizing the overall quality of the implementations.

### AUTOMATICALLY TURN SCENARIOS INTO TEST SCENARIO

The solution offers the ability to automatically convert developed scenarios into test scenarios, streamlining the testing process and improving the effectiveness of software validation.

VISUAL DATA
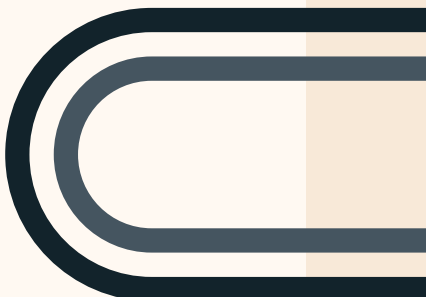
SWIFTLY CAN CREATE 60-70% OF REQUIREMENTS IN LESS THAN 10 MINUTES.

Below is the percentage of information created within 10 minutes out of 1200 user stories.

Legend: User Stories | Data Elements | User Roles | System Messages

58%
23%
10%
9%
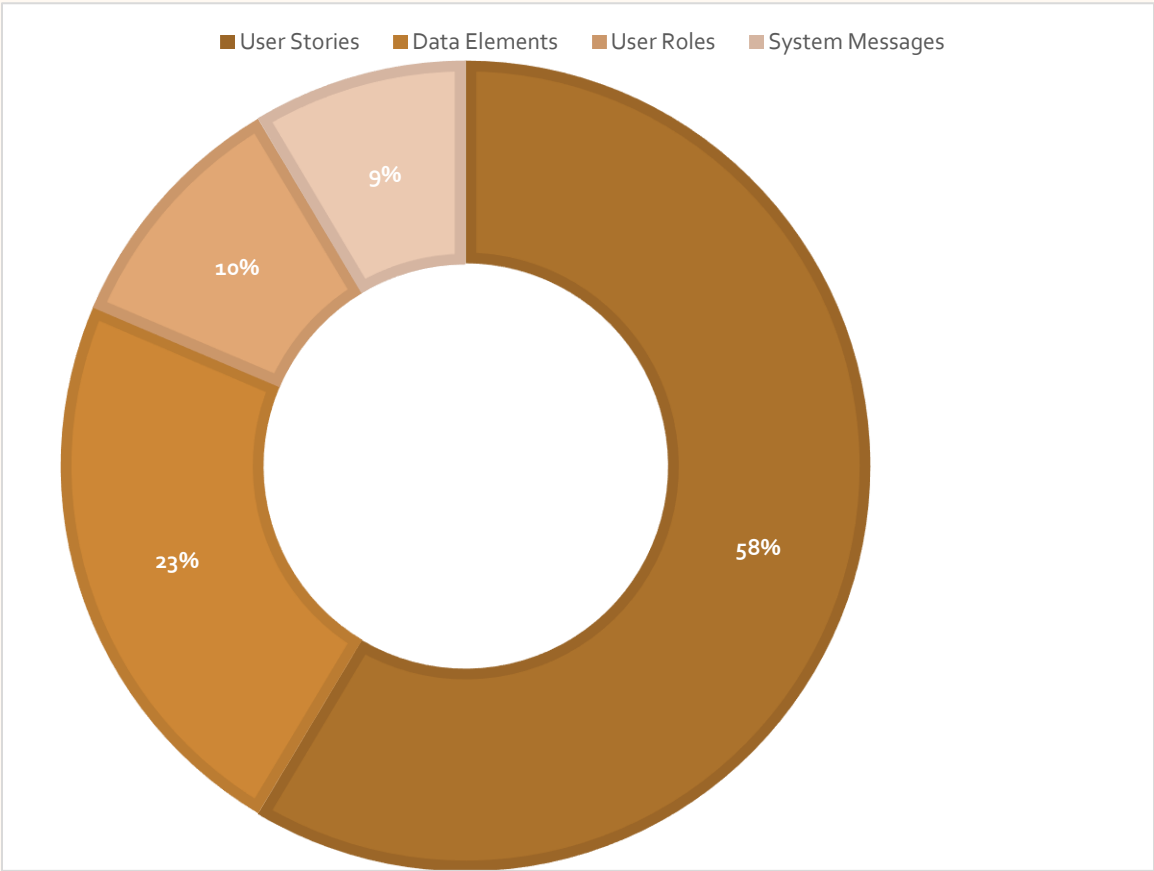
CONCLUSION

EFFICIENCY IN DEVELOPMENT

Swiftly accelerates the generation of requirements and scenarios, streamlining the initial phases of software development.

USER-CENTRIC APPROACH

The tool focuses on creating scenarios with a human-centered perspective, ensuring solutions are tailored to meet user needs and enhance user experience.

RISK REDUCTION AND QUALITY ENHANCEMENT

Swiftly is designed to minimize risks and maximize the quality of software or system implementations, contributing to more reliable and effective solutions.