

Enhancing Aging-in-Place Experiences: A Heuristic Evaluation of RENOVAHEALTH®'s Consumer Portal

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ABSTRACT

Every year, the healthcare system sees a significant rise in older adults seeking treatment for fall-related injuries, with millions requiring emergency care and hundreds of thousands hospitalized, particularly for hip fractures. As the global population ages, the need for solutions supporting independent living becomes more urgent.

The prevalence of chronic conditions among older adults underscores the importance of prioritizing mobility, accessibility, and injury prevention within living spaces early and preferably, before falls happen within the home. To prepare our communities for the shifting age dynamics occurring each day, individuals must be equipped with the proper tools necessary to make their own homes nimble, resilient, safe, and adaptable.

RENOVAHEALTH® occurs in serving as an assistive support towards aging-in-place and long-term care by driving down the risk of avoidable, emergent care costs (due to falls, wayfinding issues, etc.), prior to shifts in acuity. An early innovator in addressing these challenges, RENOVAHEALTH® is spearheading a mission to revolutionize aging-in-place experiences through advanced technologies. By leveraging Artificial Intelligence (AI) and Augmented Reality (AR), RENOVAHEALTH® aims to enhance the well-being and safety of older adults, promoting a well-balanced environment conducive to healthy aging.

OBJECTIVES

- Assess the usability and user experience of RENOVAHEALTH® platform through a comprehensive heuristic evaluation, identifying strengths and areas for improvement.
- Provide actionable insights to enhance the aging-in-place experience by addressing usability issues and optimizing functionality of the platform.

STUDY METHODOLOGY

Heuristic Evaluation Approach:

- Utilized established usability principles, including Nielsen's 10 heuristics, to assess the design, functionality, and usability of RENOVAHEALTH®'s platform.
- A team of expert evaluators systematically reviewed the portal, identifying strengths, weaknesses, and areas for improvement based on predefined heuristic criteria.

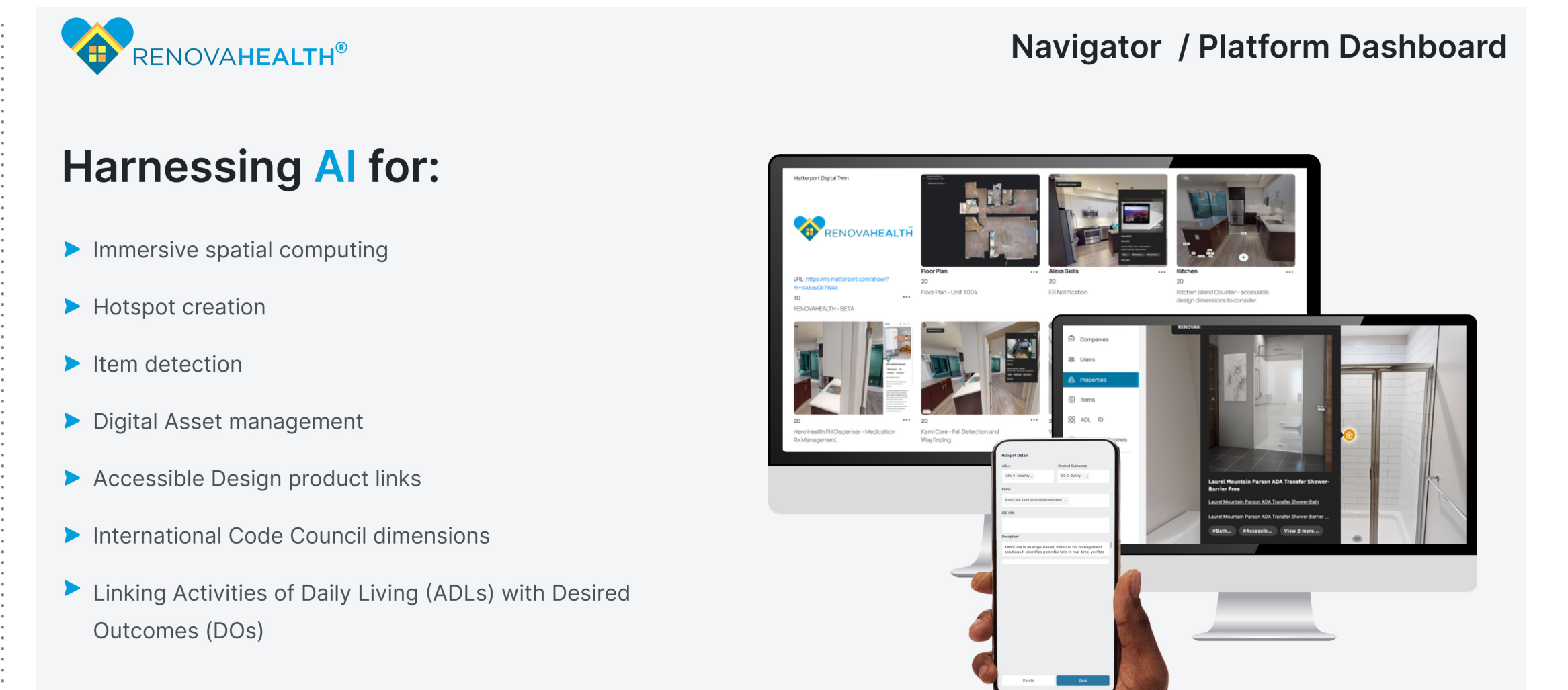
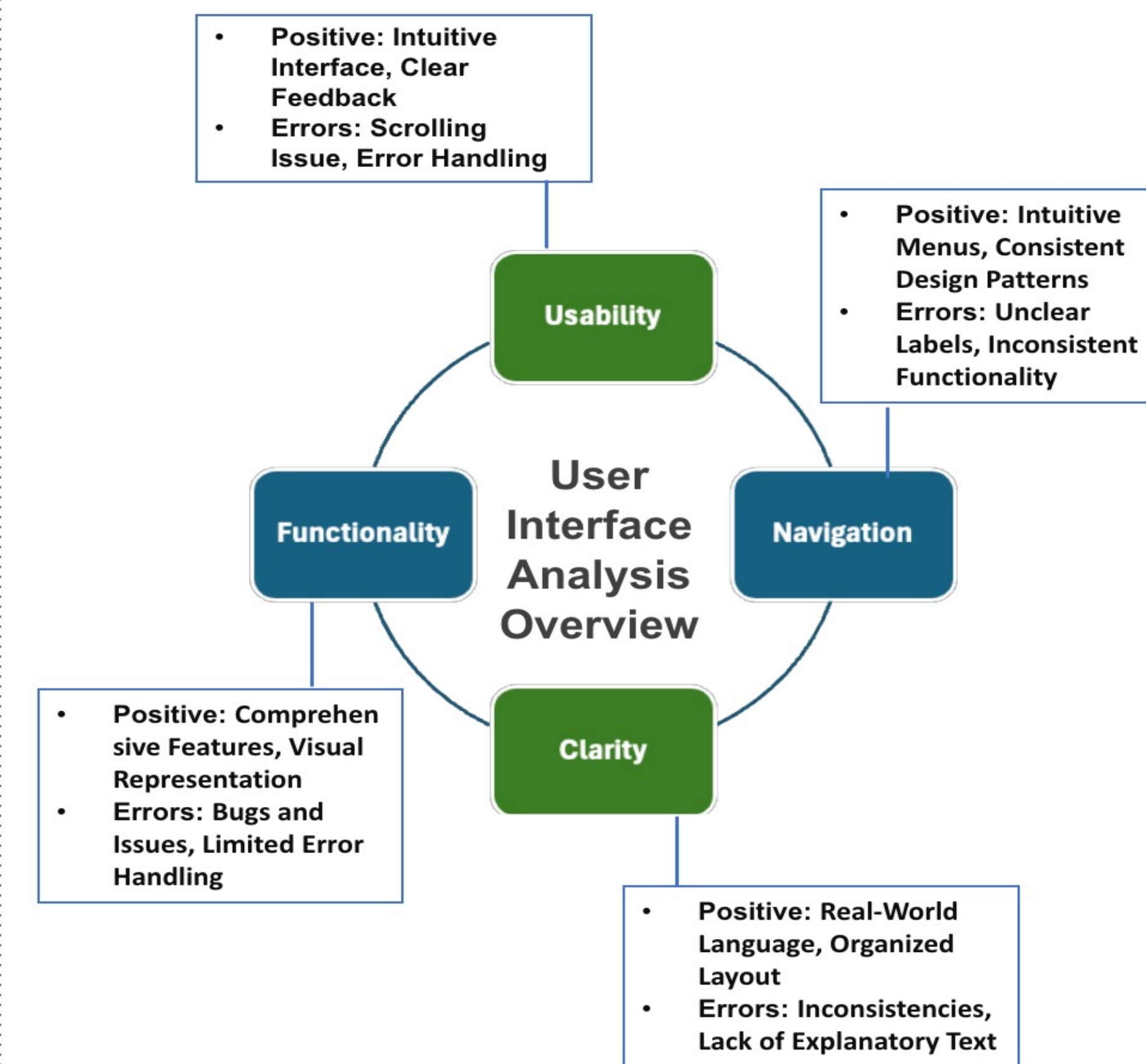
Subjective Ratings and Expert Review Notes:

- Subjective ratings were assigned to each heuristic based on the evaluators' assessments of system performance.
- Detailed expert review notes were compiled, highlighting positive features, drawbacks, and recommendations for enhancement across various portal components, including page for company profiles, user accounts, details of properties and items, and Dynamic 3D Images.

RESULTS

Heuristic Evaluation Overview

- Cognitive walkthrough assessed the platform across four key areas, outlined below.



Usability Evaluation

Strengths:

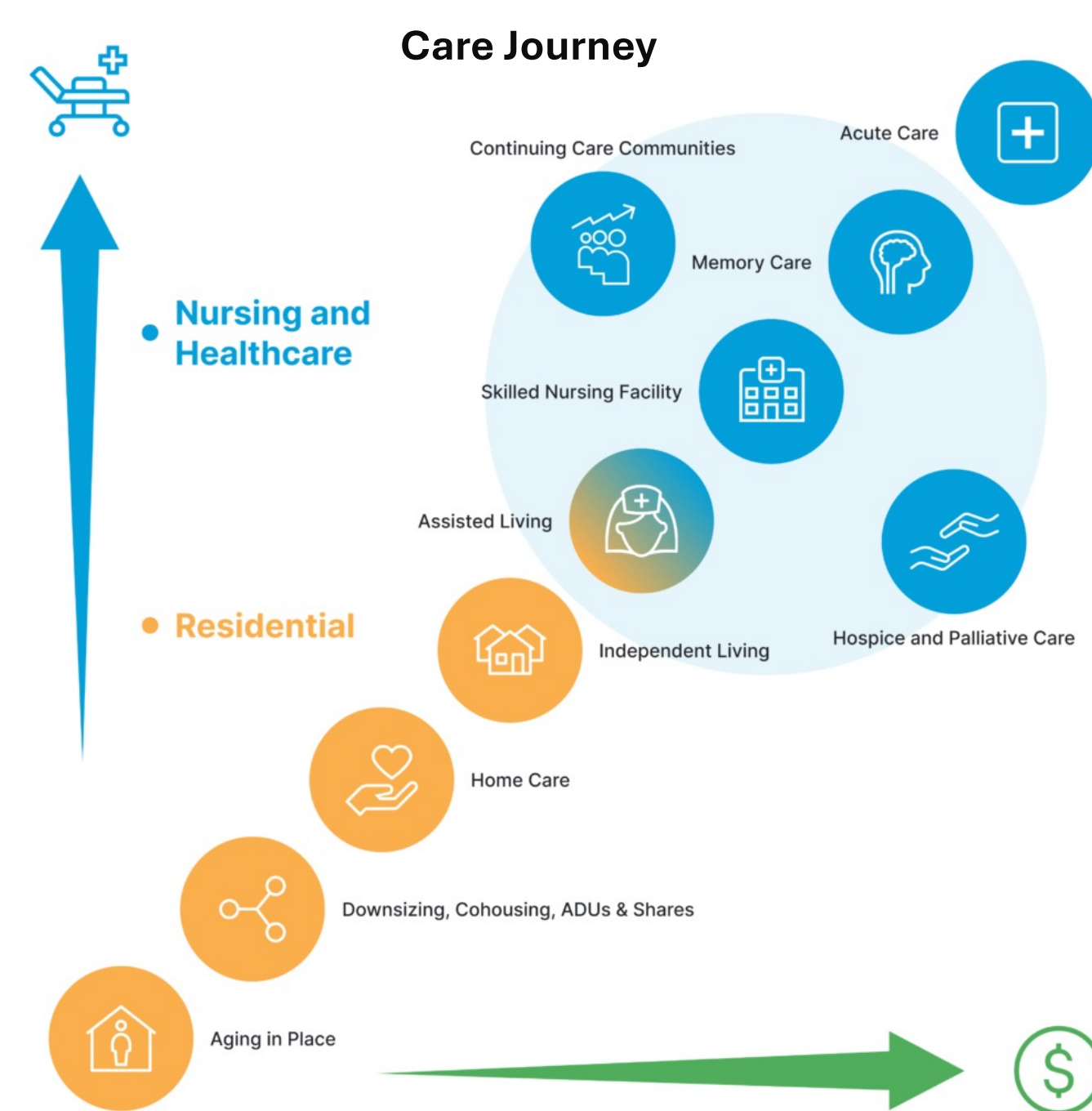
- RENOVAHEALTH® boasts visually appealing design and intuitive navigation, enhancing user experience.
- Clear feedback mechanisms provide users with immediate responses to their actions, contributing to a sense of control and understanding.
- The combination of AI and AR technologies offers personalized 3D visualization for identifying hazards, aligning with the platform's focus on injury prevention and mobility for older adults.

Recommendations:

- High-impact recommendations include fixing critical bugs, improving navigation, and streamlining data entry processes to ensure a smoother user experience.
- Moderate-impact recommendations focus on enhancing filtering, sorting, and interactive features to provide users with more control and customization options.
- Low-impact recommendations target minor improvements in terminology consistency and label clarity to enhance overall usability and user understanding.

Empowering Aging-in-Place: RENOVAHEALTH®'s Innovative Solutions for Independence and Confidence

RENOVAHEALTH® is a pioneering aging-in-place technology company focus on empowering individuals to age with dignity and confidence, offers innovative solutions that prioritize injury prevention and enhanced mobility for older adults.



Key features of RENOVAHEALTH® include:

3DAR Visualization: Utilizing advanced 3D Augmented Reality (3DAR) technology, RENOVAHEALTH® enables users to identify potential fall risks and hazards within their homes with precision.

Accessible-Design Hotspots: Unlike competitors, RENOVAHEALTH® integrates accessible-design hotspots into its platform, allowing older adults to explore and adopt universal design solutions tailored to their specific mobility and accessibility needs.

Comprehensive Education: RENOVAHEALTH® Academy serves as a holistic resource hub offering education on universal design and accessible design codes and standards, empowering individuals who wish to learn more about aging in place.

Vertically AI-integrated SaaS Platform: RENOVAHEALTH® provides a vertically integrated Software as a Service (SaaS) platform, combining injury prevention, accessible design products, consultancy services, and an aging in place forum, offering a seamless and comprehensive solution for older adults to age in place with confidence.

Heuristic Evaluation Rating

- An evaluation of the platform against Jakob Nielsen's ten usability heuristics identified problems that were prioritized based on their severity, importance, and prevalence.

RATINGS	1 Poor	2 Fair	3 Acceptable	4 Good	5 Excellent
Visibility Show system status, tell what is happening	1	2	3	4	5
Mapping Use familiar metaphors and language	1	2	3	4	5
Freedom Provide good defaults and undo	1	2	3	4	5
Consistency Use same interface and language throughout	1	2	3	4	5
Error Prevention Help users avoid making mistakes	1	2	3	4	5
Recognition Make information easy to discover	1	2	3	4	5
Flexibility Make advanced tasks fluid and efficient	1	2	3	4	5
Minimalism Provide only necessary information	1	2	3	4	5
Error Recovery Help users recognize, diagnose, & recover from errors	1	2	3	4	5
Help Use proactive and in-place hints to guide users	1	2	3	4	5

CONCLUSIONS

The heuristic evaluation and expert review highlighted several positive features of RENOVAHEALTH®, including its visually appealing design, intuitive navigation, and clear feedback mechanisms.

Feedback points focused on addressing issues such as unclear terminology, inconsistent capitalization, and functionality limitations. Recommendations ranged from enhancing user guidance for 3D navigation to implementing error prevention mechanisms and improving data organization.

Overall, RENOVAHEALTH® shows promise in reshaping aging-in-place experiences through innovative technologies like AI and AR, with ongoing efforts to enhance user experience and functionality.

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