The Human Experience Component in Intelligent Automation

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INTRODUCTION

When an organization considers implementing intelligent automation (IA) into one of their existing processes, their first question is always: "What is the cost compared to the business results we will achieve?" Clearly, if the benefits greatly outweigh the cost, it is more likely that the organization will move forward with automation. However, organizations rarely consciously and outwardly consider the human experience component before implementing IA. Most organizations have a mindset that their users will adopt the changes without question—if they implement new technologies or automation, their users will follow. These organizations often find that the notion of inevitable and immediate adoption is false due to the change in behavior that needs to occur among the users. After making a significant investment in IA, a corporation's worst fear is if their users do not adopt the automation that they just put in place. The adoption rate for any new technology is one of the most important factors that must be considered before implementation, especially when it comes to IA. Working together, IA and user experience (UX) are the true dynamic duo for successful transformation.

UNDERSTANDING UX'S ROLE IN AUTOMATION

UX is every aspect of the user's interaction with a product, service or company that make up the user's perceptions of the whole. User experience design as a discipline is concerned with all the elements that together make up that interface, including layout, visual design, text, brand, sound and interaction.[1]

- USER EXPERIENCE PROFESSIONALS ASSOCIATION

Effective UX design is a necessity for any successful technology used by consumers, but with automation as an added factor, now we can start creating an even more cohesive experience for consumers. It's fair to point out the differences between user interface (UI) and UX since the two are commonly intertwined. UI is more graphically focused, with attention to smaller details of the look and feel of the webpage. UX focuses more on the big picture, in the sense that it's science-based and takes sociology into account.[2] There is a growing understanding in the market that UX must have a harmonious relationship with automation for IA solutions to be successful.

Referred to holistically as intelligent automation, software automation can range from basic, non-cognitive automation — such as robotic process automation (RPA) that helps automate time-consuming and mundane tasks — to cognitive, problem-solving abilities — such as machine learning (ML) or artificial intelligence (AI). There are many benefits of automation, such as process efficiency, quality, regulatory compliance, cost reduction, control and standardization. Often, businesses that are interested in different types of automation are ultimately the most concerned with how these solutions can increase efficiencies throughout their organization.
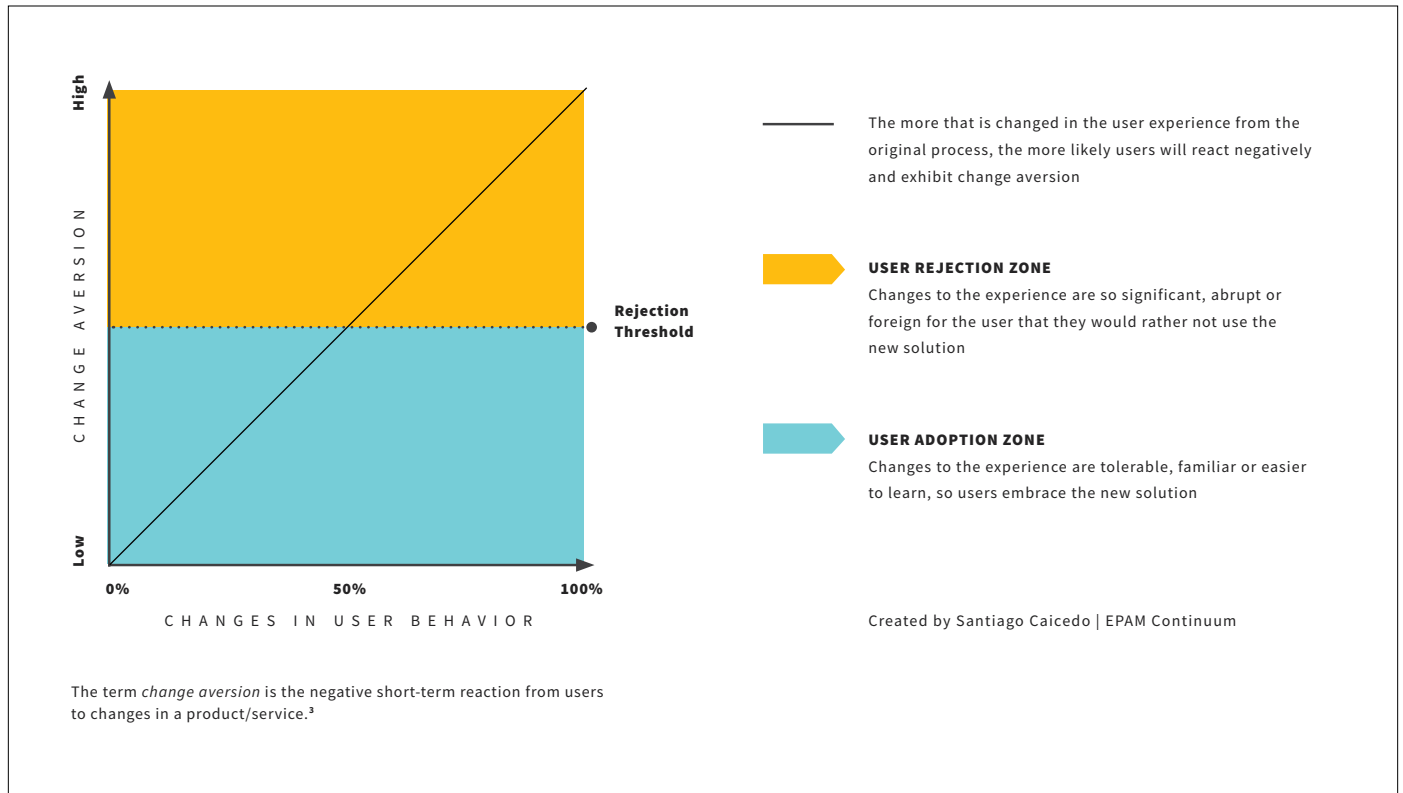
[1] https://www.nngroup.com/articles/definition-user-experience/

[2] https://www.entrepreneur.com/article/309161

HOW SHOULD UX AND IA COME TOGETHER?

"Asking users to adopt new behaviors or even modify their existing behaviors is very, very hard."

- KHOI VIN

UX and automation have a very similar goal: To make the user effective at accomplishing their tasks. During a discovery period, organizations should look at the pros and cons of their current processes and align them with the goals and needs for their future processes. Once they truly understand their organization's short-term and long-term goals and look at the problem through a human-centric approach, they can consider the best solutions to fill their needs with the help of IA.

With the help of journey mapping, organizations should already consider UX design when creating or implementing new systems, platforms or products. However, there are different situations wherein UX has yet to be considered when IA comes into the picture. The below graph shows the changes in user behavior versus the change aversion. The linear line through the graph demonstrates the conceptual idea that the more that is changed from the initial user experience, the more likely it is that users will have an increasingly difficult time adopting the automation.
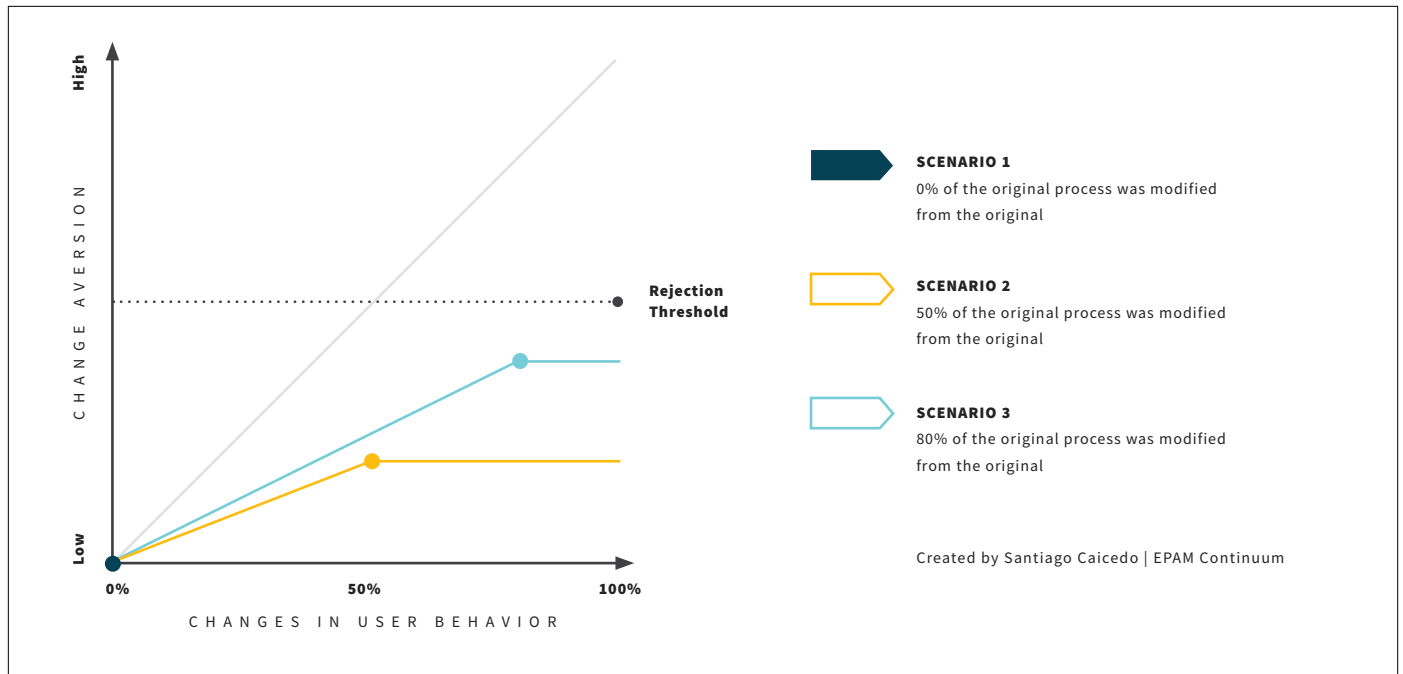

High

CHANGE AVERSION

Low

Rejection Threshold

0%   **50%**   **100%**

CHANGES IN USER BEHAVIOR

The more that is changed in the user experience from the original process, the more likely users will react negatively and exhibit change aversion

USER REJECTION ZONE
Changes to the experience are so significant, abrupt or foreign for the user that they would rather not use the new solution

USER ADOPTION ZONE
Changes to the experience are tolerable, familiar or easier to learn, so users embrace the new solution

Created by Santiago Caicedo | EPAM Continuum

The term *change aversion* is the negative short-term reaction from users to changes in a product/service.[3]

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[3] https://library.gv.com/change-aversion-why-users-hate-what-you-launched-and-what-to-do-about-it-2fb94ce65766

The goal with any new automation solution is to minimize change aversion during an implementation. When it comes to investing in automation, users need to truly adapt to the new technology for the business to realize the benefits of automation. To this day, it is shocking the number of organizations that do not realize that their employees are still using manual and time-consuming techniques instead of properly utilizing automation in order to increase efficiencies. The reality is that many businesses have not adopted automation because the IA solution was not designed with a user-centered approach. Therefore, users would rather spend more time on completing the process 'their way' than using the automation that was intended for them. This is an organization's worst nightmare — to spend money on automation, only to have it be neglected by the users themselves. This is why UX is critical to consider when looking at where automation can be implemented into current processes. Automation will be more successful if the team truly understands the customers' wants and needs during the discovery process and understands their current UX design to ensure the end product will fit cohesively for the user.

Created by Santiago Caicedo | EPAM Continuum

The above graph shows examples of three distinct scenarios where IA and UX interfaces require a completely different user integration. Here are some expanded details about these three scenarios:

SCENARIO 1: Technology adapts to the user and works behind the scenes to automate tasks without any change to the user's current process. Process change could be as little as 0% from the user's perspective.

SCENARIO 2: Automation with 'Human-in-the-Loop' aspects, where the user must work with the automation in order to complete the process. This means the process could be up to 50% different than the original process.

SCENARIO 3: A new digital product/system is implemented where there is no previous process and users are new to the product and automation. This could mean that the process has changed up to 100% from the original process.

In the first scenario, there is usually minimal (if any) change aversion. On the other hand, Scenarios 2 and 3 tend to lean toward a larger change aversion during the initial go-live phase. The more journey mapping that is conducted during the initial discovery and build of the UX/UI, the better overall user experience — and hopefully the less dramatic the change aversion — will be during go-live. Likewise, with automation, a deeper understanding of the true user experience from start to finish will hopefully minimize the change aversion and result in overall adoption from employees. Of course, change management and user training in the new processes is critical to minimizing the initial and long-term negative reaction to the change. The goal for all organizations, no matter the scenario, is not to exceed the rejection threshold.

A CASE STUDY FOR SCENARIO 2

EPAM Continuum was hired by a healthcare organization to analyze their back-office functions to determine where automation could help optimize current processes at the UX level. One of the biggest areas of opportunity found during this project was to automate a portion of a process using RPA so that an email containing specific health brochures and information packets is automatically sent to customers. Although this sounds like an easy task, it was extremely time consuming for their employees. Instead of forcing staff to change their current process and prioritize the technology, the EPAM Continuum team completed a thorough end-to-end analysis with a user-centric point of view and discovered that employees could simply assign a customer to a bot, rather than change the entire process. With the new technology in place, users only had a slight change to their overall process, which resulted in minimal change aversion and a quick, successful adoption.

A CASE STUDY FOR SCENARIO 3

The client for this use case was also part of the healthcare industry. However, this project was based on automating time-consuming reporting for internal purposes. When the EPAM Continuum team was first presented with the automation opportunity, the scope included a small portion of their total reports that they were looking to automate (only 16%). Through EPAM Continuum's end-to-end review of the process and user-centric approach, the team found that by modifying a request form into a standardized format, 100% of the cases could be automated and stored in a centralized location. All of this was discovered by looking at process re-engineering at the UX level. Although the users now have a completely different experience compared to pre-automation implementation, the new process is less labor-intensive, provides better organization and increases productivity. Even with some initial user error, the users quickly adapted due to effective user training and change management initiatives.

CONCLUSION

The case studies above are just two examples of how UX design is crucial to any technology implementation – especially when organizations are choosing to invest a large amount of money in IA. When it comes down to it, UX design is all about making people's lives easier and more efficient. It tries to address the user's needs while providing an overall positive and fulfilling experience.[4] By enabling users to be more effective and avoid mundane, time-consuming tasks, IA provides an opportunity for employees to focus their time and energy on more high-value, gratifying work. As more businesses across every industry look to invest in automation, it is vital that user experience is prioritized to make IA solutions effective. Automation will yield a much higher adoption rate if it has been implemented with a human-centric approach. To responsibly invest in automation, organizations must marry UX and IA together, which in turn can help bring efficiency and satisfaction to every user's experience.

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[4] https://uxplanet.org/the-importance-of-user-experience-design-988faf6ddca2

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