

FINAL REPORT



1 General Information

DFG reference number: MA 7260/3-1

Project number: 471224160

Project title: Completing the IS use lifecycle: Theoretical foundations, empirical evidence, and organizational guidance on why employees (don't) use firm IT again after substantial interruptions

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2 Summary

2.1 English Summary

The project develops a theory of information systems (IS) use resumption in the context of employees' post-pandemic return to office, i.e., resuming the use of the organization's IS. To achieve that objective, the project proceeds in four stages focusing on resumption types, theoretical concepts, environmental factors, and organizational recommendations.

One of the theoretical findings is the identification of ten distinct characteristics of IS use behavior relevant to understanding resumption, seven of which are consistently relevant for IS use resumption. Analyzing these characteristics and their manifestations yields a typology of five recurring patterns that provide construct clarity and boundary conditions for subsequent theory testing. It positions IS use resumption as a distinct post-discontinuation behavior at work, differentiating it from both continued use and complete discontinuation. Moreover, the project moves beyond categorization to explain the mechanisms of IS use resumption. We theorize three pathways, reasoned-action, experiential, and habitual, and show that subjective norm and attitude directly influence resumption intention, and that prior satisfaction with the system strengthens individuals' attitude toward resuming use. We explicitly separate intention from behavior in the resumption context. This provides a perspective distinct from research on

continued use under normal, uninterrupted circumstances. In addition, the project expands the focus beyond individual factors to examine how external events influence resumption. Specifically, analyzing system updates as salient external events shows how different forms of perceived value influence the intention to resume. The findings show that hedonic and information value significantly influence the intention to resume. This establishes a mechanism chain that explains the resumption process based on theoretical logic, with Type IV theorizing. Practitioners benefit from these findings through actionable guidance for managing IS use resumption. The project translates theory into concrete organizational design principles and support guidelines. For example, the project provides a typology enabling managers to identify the specific resumption type they encounter and determine the most relevant levers for action.

2.2 German Summary

Das Projekt entwickelt eine Theorie der Nutzungswiederaufnahme von Informationssystemen (IS) im Kontext der postpandemischen Rückkehr der Mitarbeitenden ins Büro, d. h. der Wiederaufnahme der Nutzung der unternehmensinternen IS. Um dieses Ziel zu erreichen, folgt das Projekt vier Phasen mit Fokus auf Wiederaufnahmetypen, theoretische Konzepte theoretische Mechanismen, Umweltfaktoren und organisationale Empfehlungen legen.

Eines der theoretischen Kernergebnisse ist, dass das Projekt zehn verschiedene Merkmale des IS-Nutzungsverhaltens identifiziert, die für das Verständnis der Wiederaufnahme relevant sind, von denen sieben als konsistent relevant für die Wiederaufnahme der IS-Nutzung erweisen. Die Analyse dieser Merkmale, einschließlich ihrer Ausprägungen, ergibt einer Typologie von fünf wiederkehrenden Mustern, die Konstruktklarheit und Randbedingungen für die nachfolgende Theorieprüfung liefern. Damit positionieren wir die Wiederaufnahme der IS-Nutzung formal als ein eigenständiges Verhalten nach der Unterbrechung am Arbeitsplatz und grenzt es von der fortgesetzten Nutzung und der vollständigen Einstellung ab.

Darüber hinaus gehen wir über die reine Kategorisierung hinaus und entwickeln eine theoretische Erklärung der Mechanismen der IS-Wiederaufnahme. Wir theoretisieren drei Pfade, überlegte Handlung (reasoned action), erfahrungsbasiert (experiential) und gewohnheitsmäßig (habitual), und zeigen, dass subjektive Norm und Einstellung die Wiederaufnahmeabsicht direkt beeinflussen, und dass die vorherige Zufriedenheit mit dem System die Einstellung der Einzelnen zur Wiederaufnahme der Nutzung stärkt. Wir trennen die Wiederaufnahmeabsicht explizit vom Verhalten im Kontext der IS-Wiederaufnahme, wodurch eine Perspektive entsteht, die sich von Forschung zu kontinuierlicher Nutzung unter ununterbrochenen Bedingungen unterscheidet. Zudem untersuchen wir, wie externe Ereignisse die Wiederaufnahme beeinflussen. Die Analyse von System-Updates als saliente

externe Ereignisse zeigt, wie unterschiedliche Formen des wahrgenommenen Werts die Wiederaufnahmeabsicht beeinflussen. Die Ergebnisse zeigen, dass der hedonische und der informationelle Wert die Absicht zur Wiederaufnahme der IS-Nutzung signifikant beeinflussen. Dies etabliert eine Kette von Mechanismen, die den Wiederaufnahmeprozess basierend auf einer theoretischen Logik erklärt, im Sinne einer Typ-IV-Theorie.

Für die Praxis übersetzen wir die Theorie in umsetzbare Gestaltungsprinzipien und Unterstützungsrichtlinien. Die Typologie ermöglicht es Führungskräften, den jeweiligen Wiederaufnahmetyp zu identifizieren und die wirksamsten Stellhebel auszuwählen.

3 Scientific Work and Results Report

3.1 Project Goals, Results, and Deviations

Project Goals. The objective of this project was to develop a rigorous and theoretically well-established perspective on the employee-focused behavior of information systems (IS) use resumption that explains why employees resume using a former IS after a period of discontinuance. Prior IS research accounts for either continued use in steady states through intention and habit (Bhattacharjee, 2001; Venkatesh et al., 2012) or discontinuation due to changes in intention or shocks (Maier et al., 2021). These theoretical lenses focus on behavior once routines are established and largely abstract from disruptions or environmental changes, such as system updates, migrations, changed work arrangements, and renewed organizational expectations, that disrupt employees' routines. Given this, we treat IS use resumption as a distinct behavior that warrants study to understand how to convince employees to use a former IS. Accordingly, we conceptualize IS use resumption as a distinct post-discontinuance behavior that requires theorizing why, when, and how employees resume using a previously used IS.

Against this backdrop, the project unfolded in four stages (see Figure 1). First, we specified the phenomenon of IS use resumption empirically to understand what resumption looks like in practice and developed a typology. Second, we theorized and empirically tested the drivers of resumption, arriving at a perspective that distinguishes antecedents of resumption intention from antecedents of resumption behavior. Third, we modeled environmental and value-based mechanisms that channel resumption following system updates. Fourth, we translated the insights into organizational guidance via an in-depth case study of a large-scale migration, which highlights the importance of parallel use.

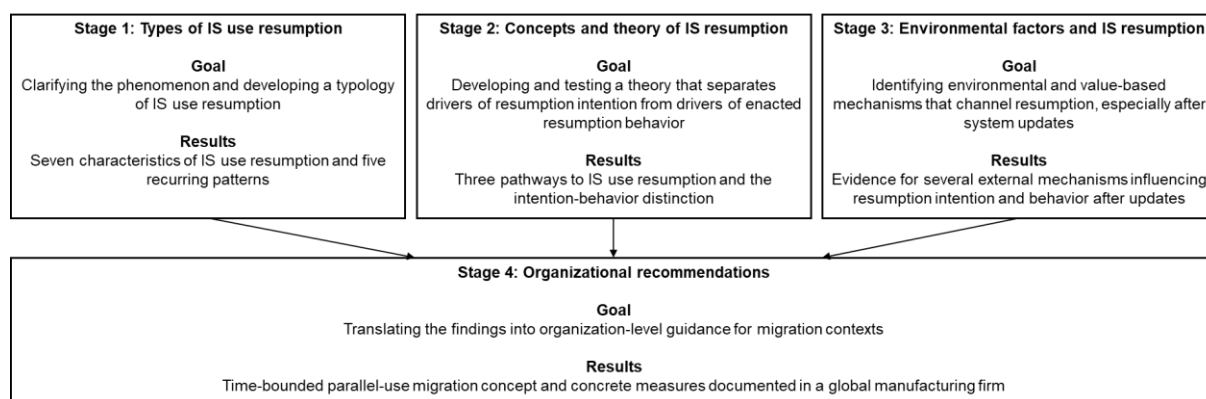


Figure 1: Project goals and results in four stages

Stage 1: Seven characteristics of IS use resumption and five recurring patterns. The first stage mapped how employees resume organizational IS after a period of discontinuity. We synthesized prior research on IS discontinuation (Maier et al., 2021) and 29 semi-structured interviews (yielding 96 resumption episodes) to identify ten distinct characteristics of IS use behavior (Hotter et al., 2022): abruptness, comprehensiveness, compulsion, consistency, depth, duration, goal-orientation, independence, absence, and frequency, each with two to three manifestations. From these, seven characteristics proved relevant for IS use resumption and consistently combined into five recurring patterns: functionality-based, lifestyle-based, convenience-based, mood-based, and situation-based. Examples include short versus long absence, mandated versus voluntary return, and permanent versus temporary resumption.

Characteristic	Manifestation	Functionality-based resumption	Lifestyle-based resumption	Convenience-based resumption	Mood-based resumption	Situation-based resumption
Absence	Short-term (0); Long-term (1)	-	-	0	1	1
Circumstances	Normal (0); Disruptive (1)	0	0	0	0	1
Compulsion	Mandated (0); Voluntary (1)	1	1	1	1	-
Consistency	Alternating (0); Non-alternating (1)	1	1	1	-	1
Duration	Permanent (0); Temporary (1)	0	1	1	0	0
Frequency	One-time (0); Multiple times (1)	0	-	1	0	0
Partitioning	Keep (0); Delete (1)	-	1	-	1	1

Note: ‘-’ indicates don’t care (either manifestation may occur in pattern); 0/1 denote the manifestation primarily associates with the pattern.

Table 1: Resumption characteristics, manifestations and patterns (Platzer et al., 2025)

Overall, the resulting typology provides construct clarity and boundary conditions for subsequent theory testing (see Table 1; Platzer et al., 2025). The typology positions IS use resumption as a distinct post-discontinuation behavior at work, differentiates it from continued use and discontinuation, and decomposes it into ten descriptive dimensions, five recurring patterns, and seven characteristics. Managers benefit from this typology by identifying which type of resumption they face and which levers are most relevant (Platzer et al., 2025).

Stage 2: Three pathways to IS use resumption and the intention-behavior distinction.

The second stage moved from typology to theoretical explanation. We theorized three pathways to resumption intention: First, a reasoned-action pathway that captures beliefs, attitude, and subjective norm. Second, an experiential pathway that captures affective evaluations from prior use. Third, a habitual pathway that captures the reactivation of routines when cues are present. We tested these pathways with a survey of 190 ex-users. The findings showed that subjective norm and attitude influence resumption intention and that prior satisfaction strengthened attitude (see Figure 2; Hotter et al., 2023).

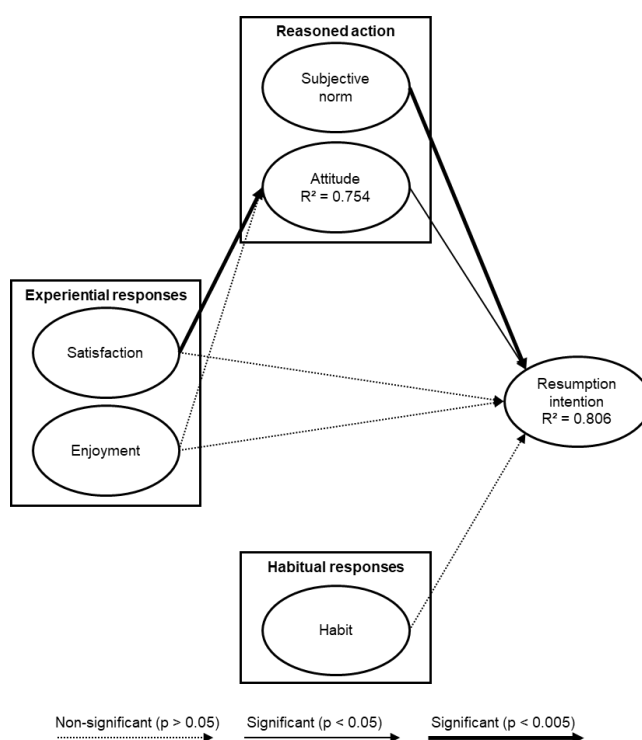


Figure 2: Structural model displaying research results (Hotter et al., 2023)

In a subsequent study, we linked intention to actual resumption behavior using longitudinal follow-up and configurational analysis (Mattke et al., 2021; Mattke et al., 2022). The main result was that behavior was not reducible to intention. System updates explained resumption above and beyond intention and other beliefs, which aligns with long-standing research calls to

recognize the role of events and context beyond static beliefs (e.g., Gregor, 2006; Hong et al., 2014). One specific finding was that scripts clarified when experiential or habitual routes dominate. IS use resumption was faster when pre-existing plans could be reactivated because the update reinstated familiar triggers or increased cue salience. The theoretical contribution is the explicit separation of intention from behavior and the identification of updates and scripts as proximal drivers of resumption, resulting in theory-driven implications. This insight explains how employees come back after a break or disruption, than why they continue using IS in normal times (Maier et al., 2022; Meier et al., 2024a; 2024b).

Stage 3: Evidence for several external mechanisms influencing resumption intention and behavior after updates. The third stage examined mechanisms, broadening beyond employee-centric drivers to study how external events (Meier et al., 2022; Maier et al., 2021) influence IS use resumption. Specifically, we analyzed system updates as salient events and surveyed 259 ex-users to test whether different value-based drivers (i.e., hedonic, information, social, emotional) influence IS use resumption intention. The results show that hedonic and information value influence resumption intention (see Figure 3; Hotter et al., 2024).

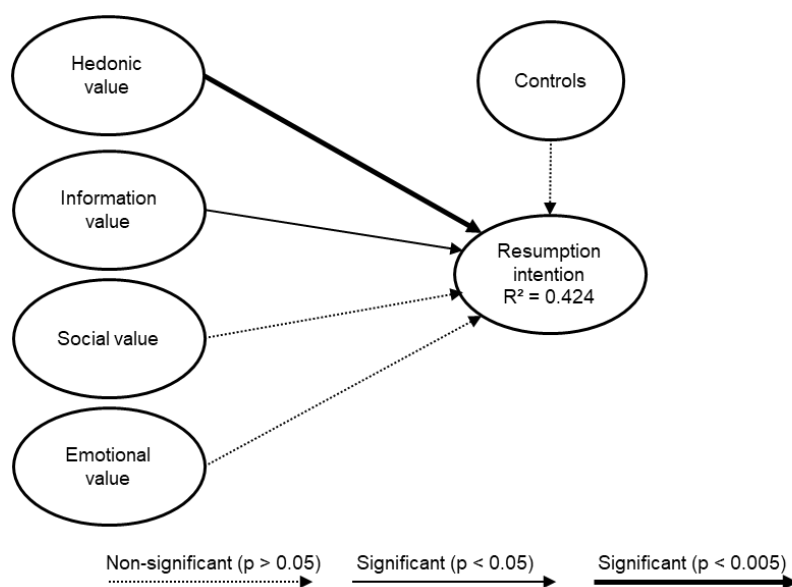


Figure 3: Structural model displaying results (Hotter et al., 2024)

Moreover, the findings establish a chain of mechanisms from discontinuation via update-driven cue exposure, changes in perceived IS value, and resumption intention to actual IS use resumption behavior when action scripts are available. The mechanism logic follows Type IV theorizing (Gregor, 2006; Pflügner et al., 2024) and explains outcomes via configurations of three conditions: updates, value shifts, and scripts. The contribution to the field is a testable theory of when an update nudges IS use resumption and when it does not, with relevance to

work on digital nudging (Valta & Maier, 2025). The contribution for practice is the insights that updates are most effective when they raise hedonic and informational payoff and preserve fluency via scripts. Conversely, purely symbolic or social features without usefulness gains constitute a weak nudge.

Stage 4: Time-bound parallel-use migration concept and concrete measures documented in a global manufacturing firm. The fourth stage translated the theory into organizational design via an in-depth case study with a global manufacturing firm (>9,000 employees). The firm introduced a time-bound parallel-use migration in which legacy and new systems ran side by side during a defined transition period. This design created a controlled setting to observe post-discontinuation resumption under dual-system conditions.

Our observations covered compliance, security, employee engagement, productivity, and business development. From these observations, we distilled seven organization-level measures: access and rights clarification, role-based identification of access needs, time-bound parallel operation, organization-wide and cross-system training, documentation standards and usage policies, performance monitoring of adoption and support tickets, and continuous-improvement routines. Together, these measures operationalize update-driven cue exposure and preserve action scripts, aligning with the mechanism logic established in Stages 2 and 3. The case shows how migration design can maintain and even improve functioning as employees resume using a former IS, which informs management practice and research.

Overall perspective. Across the four stages, the project provided an integrated theoretical understanding of IS use resumption. First, we delineated the behavior, established analytical distinctiveness, and documented its characteristics. Second, we separated IS use resumption intention from behavior and identified unique causes. Third, we modeled an event-based mechanism that links system updates to value appraisals, intention, and actual IS use resumption, conditional on available scripts. Fourth, we showed how organizational design implements those mechanisms. Together, these insights provide a coherent theoretical perspective from construct clarity to mechanism to design and extend and complement IS theories. They build on related work by accounting for environmental changes and align with calls for explanation and design relevance (Gregor, 2006) by moving from explanation to actionable guidance.

Empirical perspective. The empirical base supports these theoretical insights. We combined qualitative interviews with 63 individuals and conducted three surveys. The first survey with 190 respondents tested intention drivers. The second survey, with a multi-wave design and

269 respondents, combined intention and behavior and tested the role of updates beyond intention. The third survey with 259 respondents measured value-based drivers and showed that hedonic and informational value predicted resumption intention. The triangulation of methods allowed us to move from phenomenon mapping to variable-based tests and to configurational reasoning, where the logic of multiple sufficiency provides additional insight. The designs also supported reproducibility because constructs were consistent across studies and because we progressed from qualitative insight to quantitative tests.

Deviations from the Original Proposal. We also report a planned and transparent deviation from the original proposal. During the third stage, peer review encouraged us to emphasize voluntary resumption contexts and post-update decision points to sharpen behavioral contrasts between IS use resumption and continued non-use in order to isolate cue effects. We incorporated this guidance by selecting a gaming service and focusing on a specific app for mechanism tests. The adjustment did not change the project's goal. It strengthened construct validity for update-driven mechanisms, and we observed similar effects in the case study, where updates and scripts were also relevant in workplace use.

Publications. The results have been disseminated across peer-reviewed IS outlets. Conference contributions appeared at DIGIT and ECIS. Journal contributions include an acceptance in *Information & Management*. Two more studies are currently under review or revision.

3.2 Validity and Reproducibility of the Research Results

To ensure quality and validity, we presented preliminary findings from the first stage at the *DIGIT Workshop* during the *International Conference on Information Systems (ICIS) 2022* (Copenhagen). Moreover, the findings from the project were rigorously validated through peer-review processes, including those of leading A- and B-ranked outlets in the IS discipline,¹ such as *Information & Management* and the *European Conference on Information Systems*.

3.3 Research Data Generated in the Project

We collected qualitative, quantitative, and literature-based data.

Regarding qualitative data, we conducted and analyzed a total of 63 interviews. During the first stage, we interviewed 29 individuals using a semi-structured guideline. The interviews offer rich explanations of different types and dimensions of IS use resumption (Hotter et al., 2022;

¹ <https://www.vhbonline.org/verband/wissenschaftliche-kommissionen/wirtschaftsinformatik/vhb-rating-2024-wirtschaftsinformatik>

Platzer et al., 2025). During the fourth stage, we conducted 34 semi-structured interviews with employees of the corporate research partner (20 at the execution layer, 6 at the service-provision layer, and 8 at the management layer). The results of these interviews inform organizational design recommendations for practitioners dealing with IS use resumption.

Regarding quantitative data, we collected and analyzed survey data from 718 individuals in total. In the second stage, we conducted three studies. The first study (N = 190 ex-users) showed that subjective norm and attitude influence IS use resumption intention, while higher prior satisfaction influenced attitude (Hotter et al., 2023). In a second study, we used multi-wave data from 269 ex-users of the multiplayer online role-playing game (MMORPG) to test causal recipes positing system updates and other well-established contextual factors, such as social influence, attitude toward use, and satisfaction during use, influencing resumption behavior. In a third study, we surveyed 259 ex-users to understand the effect of four pull factors, namely hedonic value, information value, social value, and emotional value, on their intention to resume SNS use (Hotter et al., 2024).

Regarding literature data, we conducted a literature review on nonhuman primate reconciliation (Stoeckl et al., 2022).

3.4 Data Usable and Openly Accessible by Other Persons

To date, no project data underlying the publications have been made available for further use. We plan to release the data upon journal acceptance.

3.5 References

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4 Published Project Results

4.1 Peer-reviewed publications

Table 2 provides an overview of studies published in peer-reviewed outlets (journals and conference proceedings).

Year	Authors	Title	Outlet
2022	Platzer, N., Stoeckl, F., Maier, C., Eckhardt, A.	IS Use Resumption: A Qualitative Study Revealing Different Characteristics	<i>DIGIT 2022 Proceedings</i>
2022	Stoeckl, F., Platzer, N., Eckhardt, A., Maier, C.	Studying Reconciliation in Nonhuman Primates to Inform IS Use Resumption Literature	<i>DIGIT 2022 Proceedings</i>
2023	Platzer, N., Stoeckl, F., Maier, C., Eckhardt, A.	Coming Back For More: Exploring Three Theoretical Perspectives Influencing IS Resumption	<i>ECIS 2023 Proceedings</i>
2024	Platzer, N., Stoeckl, F., Meier, M., Rous, S., Eckhardt, A., Maier, C.	What Pulls Ex-Users Back? A Value-Based Perspective on Explaining SNS Use Resumption	<i>ECIS 2024 Proceedings</i>
2025	Platzer, N., Stoeckl, F., Maier, C., Eckhardt, A.	Why ex-users come back: revealing characteristics and patterns of information system use resumption	<i>Information & Management</i>

Table 2: Studies published in peer-reviewed outlets