Impact of generative AI adoption on efficiency, quality and employee experience in a global energy company

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Abstract

Large language models (LLMs) have garnered significant interest for their potential to reshape work processes through generative artificial intelligence (GAI). This study, conducted by Repsol in partnership with Accenture-Avanade and Microsoft, evaluates the impact of Microsoft's Microsoft 365 Copilot - a GAI tool leveraging LLMs - on professional efficiency, quality and experience. The research was conducted as part of a change management coaching program global multi-energy company Repsol over a four-month period. It involved a pre- and post-test experimental design with an equivalent control group.

The sample consisted of 550 people: 300 in the experimental group and 250 in the control group, selected based on objective criteria. Prioritization was based on Microsoft 365 usage ranking, replicating the company's employee distribution across general management, professional categories, job family groups, gender and age. Methodology included real experiments based on practical use cases, surveys, focus groups and interviews. The measurement plan incorporated descriptive analysis, hypothesis testing, linear regression, correlation analysis and clustering. Support was provided through an active user community, hands-on training, a help corner and a gamification program.

Results revealed an average time saving of 121 minutes per week, adjusted for impacting factors such as tool adoption level, number of Microsoft 365 Copilot applications used and "productivity capture", the proportion of saved time spent on non-productivity-enhancing tasks (e.g., wellness activities, spontaneous discussions, team bonding). A 16% increase in deliverable quality was also observed. Regarding user experience, participants reported feeling confident, calm and motivated. Notably, 61.9% of licensed users expressed reluctance to return to work without Microsoft 365 Copilot, with users becoming frustrated when the tools malfunctioned or were available only to a limited group.

"61.9% of licensed individuals would not like to go back to working without Microsoft 365 Copilot."

Content

01
Introduction

The rise of Artificial General Intelligence (AGI) tools and their growing prominence in professional environments present a significant challenge for organizations: to leverage data for evidence-based decision-making and to transform this technological impact into an opportunity for new work models and methods.

Repsol is committed to AGI as a driver and transformer of work practices. Founded in 1986 and employing over 25,000 people (Repsol SA, 2024b), the company has set a strategic objective to accelerate its transformation, advancing its energy transition and pioneering a sector-wide commitment to achieve net-zero emissions by 2050. Repsol is determined to "transform businesses with generative AI, boosting productivity and digitizing all employees to enable digital transformation at scale" (Repsol SA, 2024a). For Repsol, technology and people are key enablers of transformation (Repsol SA, 2024a). Thus, the company is spearheading this initiative alongside its strategic partner, Microsoft (Repsol SA, 2021), implementing a change management program to address the challenge of transforming work methods (Microsoft, 2023).

"The company is determined to transform businesses with generative AI, boosting productivity and digitizing all employees to enable digital transformation at scale."

Repsol aims to lead the contribution to social advancement by being the first energy company to enhance people's experiences and improve employee productivity using generative AI. To this end, the company is promoting a collaborative effort between the General Management of People and Organization, within the framework of the Repsol Work Model Project, which seeks to improve employee collaboration. Simultaneously, the General Management of Energy Transition, Technology, Institutional, and the Assistant to the CEO are working together to create the Competence Center for Generative Artificial Intelligence and launch the Second Wave of the Digital Program (2023-2027), aiming to promote "new work methods" by incorporating AI into employees' daily routines.

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AI as a technology for efficiency

Microsoft introduced Copilot for Microsoft 365 at the beginning of 2023 (Spataro J., 2023) as the integration of OpenAI's AGI technology into an evolved version of the classic Microsoft 365 assistant. Copilot for Microsoft 365 is embedded within various Microsoft 365 applications (Outlook, Teams, PowerPoint, Word, etc.), offering AI-driven capabilities such as analysis, composition, synthesis, and content creation based on prompts entered by the user. To achieve this, it relies on the organization's information available in the cloud, while respecting each user's access privileges, and provides the option to enhance this information with web content, always referencing the original source.

Recent studies on generative AI are beginning to show consensus around the idea that this technology leads to time and effort savings in both routine and creative tasks, with evidence of improvements in text quality (Dell'Acqua et al., 2023; Noy & Zhang, 2023). Additionally, 58% of human resources professionals expect AGI to significantly or completely transform their work in the next three years (Future For Work Institute, 2024).

However, Microsoft 365 Copilot is still in its early stages of organizational adoption. According to McGregor J. (2023), at the beginning of this research, only 600 companies worldwide were using it. Consequently, data on its impact on daily employee tasks are scarce, with only Microsoft Research-promoted studies available (Cambon et al., 2023; Microsoft, 2023).

Therefore, there is a need to investigate its impact in order to explore the potential value of large-scale Microsoft 365 Copilot adoption for organizations. However, since this study began in October 2023 and the official launch of Microsoft 365 Copilot did not take place until November, it was considered a part of the EAP (Early Access Program) initiated in August of that year, through which a private preview of the product—still subject to stability and performance improvements—was provided. ∎

02
Methodology

Research methodology

Analyzing the design and implementation of a generative AI testing program and assessing its influence on a corporation is complex, given the multiple data collection sources and participant types.

This study employs a case study approach, a research strategy that examines a phenomenon in-depth within its natural context, without manipulating variables or the environment, using diverse evidence sources and data collection and analysis methods. A case study enables exploration, description, explanation and understanding of the studied case's characteristics, processes, problems and results, as well as theory generation or hypothesis testing (Yin, 2003; Stake, 1995; Merriam, 1998).

To mitigate potential impacts on internal and external validity due to lack of variable control, we carefully selected and justified the case study. We triangulated evidence sources and qualitative and quantitative data collection and analysis methods, seeking complementarity. Additionally, we developed a study protocol detailing steps and criteria, contrasted findings

with other researchers (including Microsoft Research) and study participants and used the control group as a reference. We have explicitly stated the research limitations and implications (Yin, 2003; Stake, 1995; Merriam, 1998).

The research design is experimental, with a control group and pre- and post-analyses (before and after integrating Microsoft 365 Copilot into the daily routines of 300 licensed participants) (Hinkelmann & Kempthorne, 2008; Mitchell & Jolley, 1988). The experimental group consisted of 300 licensed employees, with a control group of 250 mirroring the former. Both groups represented the company's distribution of employees by General Management, professional category, job family group, gender and age, prioritizing the sample according to Microsoft 365 usage ranking.

We analyzed:

a) Efficiency, quality and experience results for both groups, comparing and identifying Microsoft 365 Copilot's potential impact using statistical analysis of independent sample means (experimental vs. control group).

b) Evolution of efficiency, quality and experience indicators throughout the pilot period, using statistical analysis of mean differences in related samples (subjects with Microsoft 365 Copilot) at two time points (initial and final surveys).

c) Tool usage through Microsoft 365 Copilot adoption among pilot participants.

d) Correlations between survey and sociodemographic variables to identify patterns and exploratory analysis of employee archetypes (clustering) to identify possible adoption scenarios.

Research hypothesis

The study tested the following hypotheses to measure the effect of incorporating Microsoft 365 Copilot:

The efficiency axis.

For the efficiency axis, the hypotheses aim to demonstrate whether incorporating Microsoft 365 Copilot:

1. Generates time savings or increases task development speed. These savings are quantified in minutes per week through experiments (real-time stopwatch measurements) and surveys (self-perception). The final weekly time savings will be calculated based on the results of the experiments (70% weighting) and surveys (30% weighting).

2. Reduces task management effort, measured by perception of favorability ("agree" and "strongly agree" with respect to total responses) in experiments and surveys.

3. Generates behavioral changes in user activity, measured through Viva Insights advanced indicators (Microsoft, 2024).

The quality axis.

For the quality axis, the hypotheses aim to demonstrate whether incorporating Microsoft 365 Copilot:

1. Improves work quality, measured through the percentage of favorability evaluated by two observers using a five-dimension rubric to apply scores to writing, communication, originality, design and analytical thinking (Annex 1); and by the participant through self-perception surveys.

2. Impacts employees' not reviewing the results of deliverables.
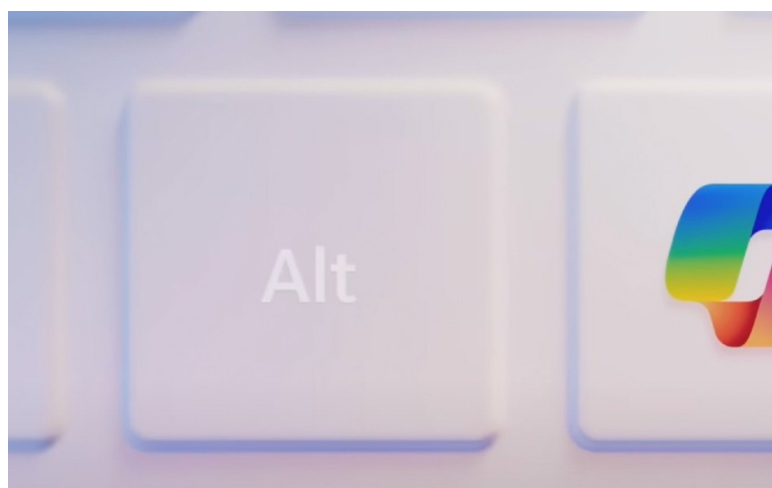
The experience axis.

For the experience axis, the hypotheses aim to demonstrate whether incorporating Microsoft 365 Copilot:

1. Improved employee experience, measured both as satisfaction and recommendation through Microsoft 365 Copilot's Net Promoter Score (NPS) overall and by application. The definition of NPS is taken from Bahre S. (2022) "the percentage of people who score a 9 and 10 (promoters) minus the percentage of people whose score is between 0 and 6 (detractors)", using standard questioning to ask in the formula: "to what extent would you recommend a certain product/service to a certain group"?

2. Improved confidence in Microsoft 365 Copilot and IAG over time.

3. Impact on participants' emotions and feelings.

4. Affects coexistence of people with and without Microsoft 365 Copilot.

Satisfaction, recommendation (NPS), confidence and feelings were measured through perception variables in surveys.

For adoption purposes, the objective is to validate if change management increases employees' adoption of the tool by increasing usage and application-specific use. For this purpose, the scorecard available in Microsoft is used to provide the latest connection date of each week for Microsoft 365 Copilot as well as the usage per application and the frequency of use each employee self-reported in the surveys.
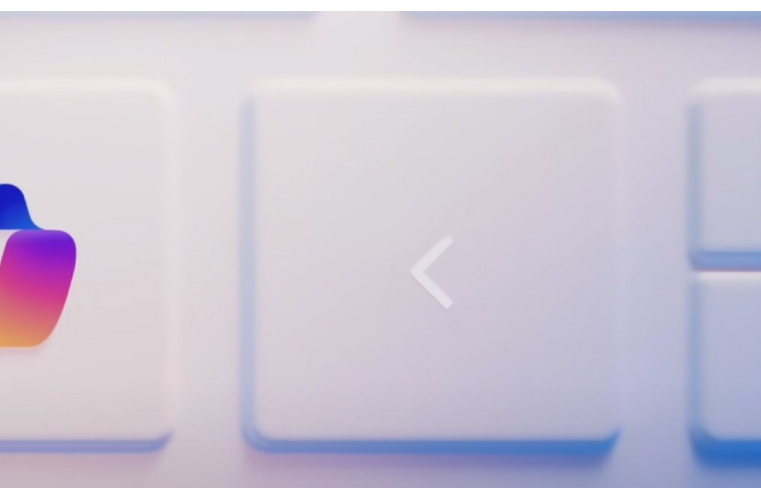
Measuring instruments

The measuring instruments used were:

7 experiments.

A total of 118 employees participated (half licensed and half unlicensed) and 14 efficiency indicators (real-time time measurement) and 26 items on the quality of results (rubric with observable evaluable items (Annex 1) were evaluated. A skills survey was conducted at the beginning of each experiment and, at the end, a measurement and satisfaction survey (details in Annex 2).

Each experiment is designed as "a part of the research where certain variables are controlled to observe the effect on others" (Campbell Donald T. & Stanley Julian C., 2015). Each experiment represents a real situation from different areas of the company, consisting of three tasks. Participants were given about 1.5 hours to complete them, with the time calculated as the difference between receiving the task assignment email and submitting the completed task email. For example, a daily engineering project meeting was simulated where participants had to take minutes, propose the next meeting's agenda and prepare a Steering Committee presentation on the project status.

7 Focus Group.

Each group of experiment participants was formed based on knowledge, interest, etc. (León O. G. & Montero I, 2003; Sampieri R. H. & Collado C. F., 2005). They also participated in a focus group that discussed the benefits and barriers to integrating GAI in their daily lives.

Weekly activity reports.

To measure tool use, the primary input was Microsoft's weekly activity reports, specifying the last date of user activity for Microsoft 365 Copilot overall and in each integrated application (Teams, Outlook, PowerPoint, Word, Excel, Loop and Whiteboard). Adoption is calculated as the number of active weeks relative to the total weeks the license has been available to each user. A week is considered active if a user makes at least one query in any Microsoft 365 Copilot application.

2 perception surveys.

Conducted at the beginning and end of the experiment for both the licensed and control groups. They included five qualification questions, ten experience questions, eight efficiency questions and four quality questions. The second survey introduced four specific questions for pilot project leaders. Questions were evaluated using a Likert scale of favorability or frequency. Participation in each survey is distributed as follows, with details in Annex 3.

	License	Control
Population	300	250
1st survey	65.3%	87.2%
2nd survey	62.0%	80.8%

20 interviews.

Over 20 semi-structured contrast interviews were conducted (León O. G. & Montero I, 2003) throughout the process. These aimed to compare perception data from surveys and quantitative results from experiments, as well as to understand limitations encountered by less active participants.

Analysis of advanced metrics from Viva Insights.

In a cross-cutting way, Viva Insights reports provided by Microsoft were available to measure employee collaboration, with various indicators on daily dynamics (meeting times, concentration, emails, multitasking, co-attendance, time with manager, etc.) (Microsoft, 2024). (Annex 4).

Sociodemographic reports.

Reports on sociodemographic variables (age groups and sex) available in the company were used, as well as job variables (family groups or type of job, address of belonging, professional category, etc.) (Annex 4).

Analysis techniques

The statistical analysis of the results was conducted as follows:

Descriptive analysis: Given that the type of data in the study was discrete quantitative data, Frequency diagrams were developed for the study's discrete quantitative data. These graphs illustrate the most common responses to each question type, supporting conclusion-drawing and providing visual, intuitive perspectives.

Correlation matrix: Displays the intensity and direction of the linear relationship between two or more variables, useful for summarizing a set of data and finding patterns in them.

Clustering: Identifies similarities between data and divides them into distinct groups (clusters), through pattern recognition (Hair Joseph Franklin et al., 2010). Two clustering methodologies were used for this study:

→ K-modes. This algorithm was chosen in response to the discrete numerical nature of the data. It defines groups based on the number of coincident categories between data points, contrasting with the more common k-means algorithm, which groups numerical data based on Euclidean distance.

→ Hierarchical clustering. This point group analysis method constructs hierarchy of groups. Here, the agglomerative approach was tested, using a "bottom-up" strategy where each object begins in its own group (leaf). The two most similar groups merge into a larger group (node) at each stage. This iterative process continues until all points belong to a single larger group (root) containing all data.

Hypothesis testing: Evaluates whether a presumed population characteristic aligns with sample observations. Non-parametric hypothesis testing was conducted for this analysis, suitable for datasets with unknown probability distributions. The tests used were:

→ Wilcoxon Contrast: For related samples, e.g., when comparing employee responses at different time points (e.g., question on task execution time before and after using Microsoft 365 Copilot).

→ Mann-Whitney U test: For samples independent of each other, e.g., when you want to compare employee responses based on the frequency of Microsoft 365 Copilot use (e.g., comparing responses between the group of licensed employees who use Microsoft 365 Copilot daily vs. those who use it 1 day per week).

Development
of the research

The research spanned four months, from October 2023 to January 2024. However, in July 2023, Microsoft 365 Copilot licenses were assigned to a core group of 15 people ("Family and Friends"), who managed the entire pilot. This group proved invaluable in implementing initial actions for the 285 people who would receive licenses later.

Welcome activities and Microsoft 365 Copilot usage promotion began in October. In November, the first survey was sent to all participants (experimental and control groups). Both surveys compared efficiency, quality and satisfaction in daily task execution, without evaluating Microsoft 365 Copilot's impact. Participants were asked to define three daily tasks and detail their time in minutes/week, enabling intra-group and inter-group comparisons on actual reported tasks. Participation included 196 licensed employees and 218 from the control group.

Community engagement, training and support activities continued with the 300 licensed participants. High-value use cases for Microsoft 365 Copilot were identified. A gamification initiative was launched to recognize and reward highly engaged participants, further energizing the community.

Experiments began in January 2023 with 118 employees, approximately split between experimental and control groups. Participants were chosen based on objective criteria, including prior "engagement" measured by participation in energizing sessions and Microsoft 365 Copilot usage reports. Control group participants were selected from initial survey respondents. The 118 participants were divided into seven experiments by application and case, considering task representativeness in their daily work.

To mitigate evaluator bias, different evaluator pairs were assigned to each deliverable in each experiment.

Post-experiment, participants answered a survey to rate their perception of result quality, time savings (for licensed participants) and overall experience. A focus group allowed participants to share insights on generative AI's impact on their daily work, with evaluators recording their interventions.

In late January, all participants were re-surveyed about Microsoft 365 Copilot's impact on efficiency (time savings), result quality and experience. This follow-up aimed to contrast improvements across the three axes and test hypotheses. The survey included four questions for pilot leaders about managing the shift to AI-integrated work methods, long-term potential and necessary skills.

The second survey saw participation from 202 licensed employees and 186 from the control group.

Throughout the research, weekly reports tracked actual Microsoft 365 Copilot usage (adoption) by licensed participants, both overall and by application.

At the end of the project, a comparison was made between October–December 2022 and the same period in 2023 using Microsoft Viva Insights collaboration indicators. This analysis examined differences between experimental and control groups, considering family group, professional category and gender (see Annex 4).

Before each experiment, participants completed a survey assessing their Microsoft 365 Copilot skills for relevant tasks. During the three tasks in each experiment, two evaluators observed, timed and assessed result quality using a rubric.

Change management methodology

Repsol has developed a unique change management framework, blending elements from the ADKAR model (Hiatt, 2006) and Kotter's (2012) eight-step change model. This framework, born from the company's accumulated experience, is distilled into three phases that mirror Kotter's approach:

1. Activate: Generate a shared vision and visualize impact.
2. Adapt: Plan, implement and monitor actions.
3. Advance: Sustain and reinforce change.

To maximize the adoption of Microsoft 365 Copilot, Repsol enriched its Active-Adapt-Advance framework by incorporating practices from OpenSpace Beta and Lean Change Management. This integration enhanced adaptability (Hermann et al., 2018) and aimed for higher impact in less time (Little, 2014).

The change management plan's initial iteration began with a small group of 15 employees. This pre-testing phase, conducted two months ahead of the wider rollout, allowed for the validation of tools, training methods and surveys. Building on the measurement plan outlined earlier, three additional plans were developed to structure the Microsoft 365 Copilot pilot:

1. Communication Plan: Designed to ensure participation and commitment from both licensed and non-licensed employees. The communication style embraced principles of proximity, simplicity and friendliness.

→ **Pre-pilot:** Project presentations to management committees and key stakeholders (executives, managers, HR Business Partners and participants).

→ **Launch:** Welcome and onboarding communications for participants.

→ **During the pilot:** Communications on training and digital corners, on tips and tricks, on satisfaction and measurement surveys and gamification; communication of results and project status to stakeholders.

→ **Post-pilot:** Comprehensive results communication in key forums to inform adoption decisions and feedback to pilot participants.

2. The Support Plan ensured continuous learning and assistance throughout the process. It encompassed a comprehensive strategy including training, support resources, online sessions and ongoing help through FAQs and weekly digital corners. Gamification elements were incorporated to boost adoption. A Microsoft 365 Copilot community served as the primary communication channel for licensed participants, facilitating knowledge exchange, sharing experiences, best practices, tips and daily reminders. User activity was closely monitored, with inactive users contacted, resulting in four license reassignments during the project. The gamification aspect identified the top ten weekly users and the top three overall users at the pilot's end, using a point system based on survey participation, training attendance and community engagement.

3. The Technology Plan managed incidents, updates and technical aspects of Microsoft 365 Copilot, aiming to ensure smooth operation, minimize disruptions and optimize user experience. Shared site security was reviewed and proper permission management was emphasized before the pilot's launch to guarantee confidentiality. Cybersecurity and information protection teams tested the model's security endpoints. All tool-related incidents were resolved, leading to continuous product improvement. Feedback was provided to the product team through established channels and a dedicated Microsoft team was engaged to understand needs, address challenges and expedite issue resolution. ∎

03
Results

This study provides insights into the potential of incorporating generative artificial intelligence tools, focusing on measurement and adoption.
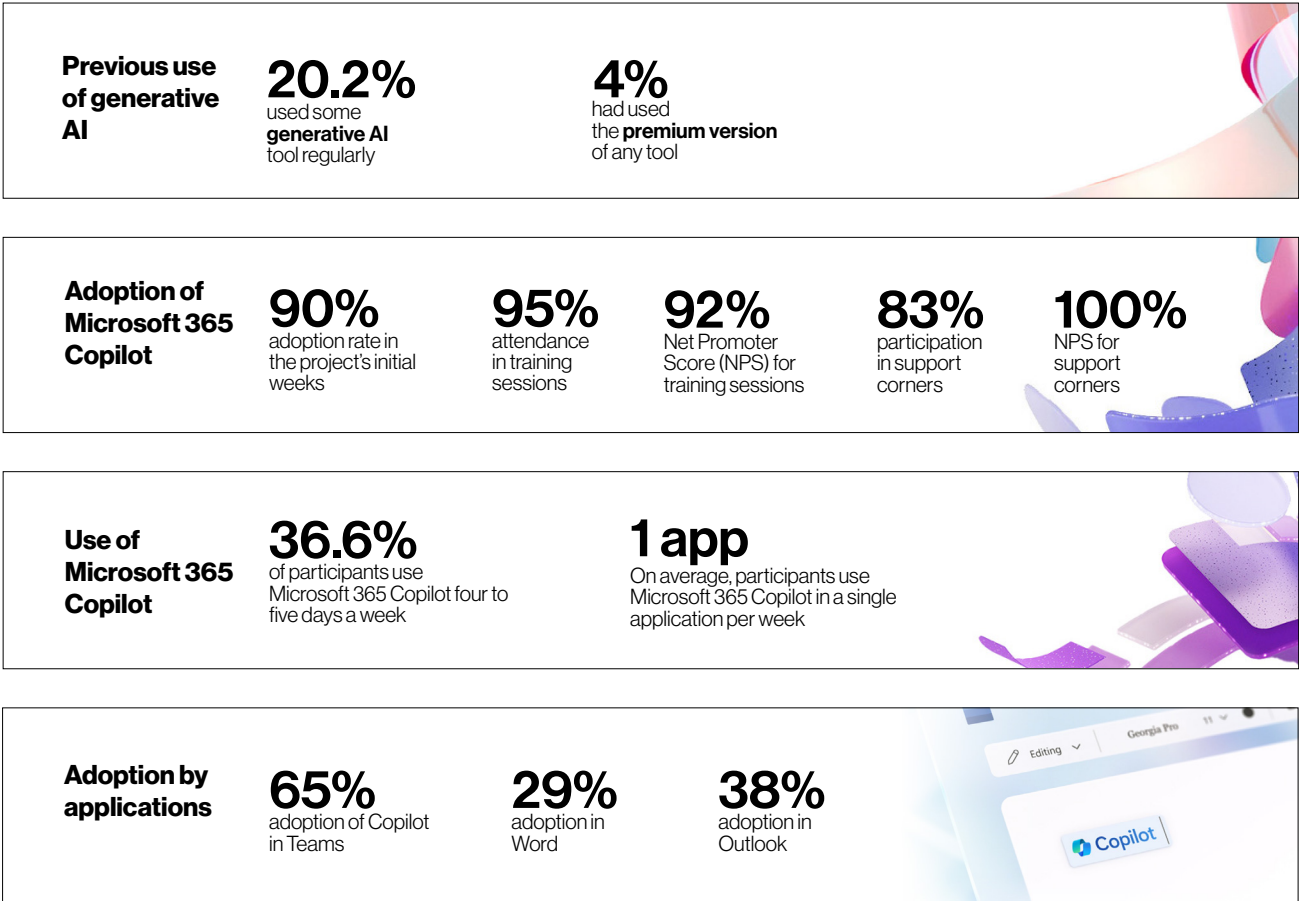
Adoption and use of generative artificial intelligence tools

Prior to the pilot, 20.2% of participants reported frequent use of a generative AI tool, with only 4% having personally acquired a premium license.

Microsoft 365 Copilot adoption across applications peaked at 90% in the initial weeks, later stabilizing around 60%. These fluctuations corresponded with specific support activities. Participants highlighted three key elements (both in surveys and interviews): training sessions, which saw over 95% attendance and achieved a 92% Net Promoter Score (NPS); support corners, with 83% participation and a perfect 100% NPS; and ongoing tips and updates shared through the community during the pilot's first phase.

Adoption rates varied significantly across different tools. Teams led with 65% adoption, outperforming second-place Outlook by 27 percentage points. Excel, despite its widespread use in the organization, saw the lowest adoption. Interviews and focus groups attributed this to Microsoft 365 Copilot's lack of maturity in Excel, citing the need for more structured, logical prompts rather than natural language inputs. It is also worth mentioning that Microsoft 365 Copilot was only available in the new version of Outlook, which was different from the version

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Previous use of generative AI

20.2%
used some
generative AI
tool regularly

4%
had used
the **premium version**
of any tool

Adoption of Microsoft 365 Copilot

90%
adoption rate in
the project's initial
weeks

95%
attendance
in training
sessions

92%
Net Promoter
Score (NPS) for
training sessions

83%
participation
in support
corners

100%
NPS for
support
corners

Use of Microsoft 365 Copilot

36.6%
of participants use
Microsoft 365 Copilot four to
five days a week

1 app
On average, participants use
Microsoft 365 Copilot in a single
application per week

Adoption by applications

65%
adoption of Copilot
in Teams

29%
adoption in
Word

38%
adoption in
Outlook

users were familiar with. It is important to note that Microsoft 365 Copilot in Excel was in public *preview* during this research. Although Microsoft 365 Copilot is available in eight applications, users typically engage with it in only one per week.

Participants emphasized the importance of close support in change management (Peña, B., 2023), rating it with an NPS of 52%. They also valued the training sessions and ongoing communication of success stories, tips and prompt examples.

It can be stated that the adoption process, since

it impacts the way of working, is a continuous learning process that places people at the center, valuing experimentation and curiosity.

A total of 36.6% of participants incorporated Microsoft 365 Copilot into their daily routine, using it four to five days a week. The primary reasons for not using it daily were, in order of importance: lack of time, unmet needs and technical limitations or errors (such as those encountered with Microsoft 365 Copilot in the new Outlook).

The results on the main measurement axes are presented below:

Impact on efficiency and time savings

Participants in the Microsoft 365 Copilot experiment saved an average of 121 gross minutes per week, or 96.8 hours per year per employee. This figure was calculated by weighting 70% from experiments and 30% from survey data. Savings were highest for tasks like content summarization, information retrieval and email management, but minimal for translation, team management/planning and data analysis. No savings were observed when using Copilot M365 in Excel in public preview due to limitations stemming form the tool's lack of maturity and the need to use the English language in prompts in a more logical rather tan natural way, which compromised both efficiency and quality.

"Participants saved an average of 121 gross minutes per week, or 96.8 hours per year per employee."

These time savings align with other research findings, such as a 37% time reduction in generic tasks (Noy et al., 2023) and a 25.1% improvement in specific tasks for consultants (Dell'Acqua et al., 2023). The Future for Work Institute (2024) found near-unanimous agreement (98%) among frequent AGI users that it would reduce task completion time in HR contexts.

Time savings varied across job families: operations and production (260.41 min/week); engineering and maintenance (225.42 min/week); financial and insurance (218.67 min/week), with the groups saving the least legal affairs (34.5 min/week) and taxes (15.02 min/week). These differences, revealed in semi-structured interviews, stem from certain groups' need for accurate, consistent information over time, which Microsoft 365 Copilot's inferences don't always provide or which are due to the difference in response based on the information to which the user has access.

Looking at the distribution of these time savings by professional category, Microsoft 365 Copilot saves the most time in task performance for qualified technical positions (126.07 min/week) and professionals (112.79 min/week) and senior professionals (101.83). People working in the field (32.19 min/week) and on administrative tasks (75.87 min/week), however, saved less time.

Professional category / Weekly time savings per person	
Qualified technicians	126.07 min
Professionals	112.79 min
Senior professionals	101.83 min
Professionals in the field	75.87 min
Administrative	32.19 min

Se trató de identificar distintos clústeres en base a la eficiencia y considerando diferentes variables como categoría profesional, grupo de familia, etc. Sin embargo, la variedad existente entre los diferentes grupos provoca que no exista convergencia, no pudiendo identificar grupos homogéneos, aun habiendo aplicado diferentes métodos para analizarlo.

Productivity impact estimates considered adjustment factors beyond Forrester's standard productivity capture (2022), which for the purposes of this research assumes the same value (50%) as tools such as Microsoft's own Microsoft 365 E3, Viva, etc. (Diagne, 2022; Forrester, 2023). First, we demonstrated how the average adoption rate (60%) affects the savings obtained. Second, we analyzed the impact based on the number of key applications (those in the first quartile of use) where we use Microsoft 365 Copilot (42%).

Family groups / Weekly time savings per person	
Operations and production	26.41 min
Engineering and maintenance	225.42 min
Financial and insurance	218.67 min
Legal matters	34.5 min
Prosecutor	15.02 min

Applying these factors, net productivity savings were 15 minutes per week per person. It is important to note that the remaining time, while not counted as productivity, benefits employee well-being and engagement (Seymour & Dupré, 2008).

A total of 75% of licensed employees felt that Microsoft 365 Copilot reduced task effort and 76% reported increased task speed.

Finally, there is a correlation between the frequency of weekly use of Microsoft 365 Copilot and time savings. Frequent users saved 81.4 minutes more (202 total per week) than less frequent users, aligning with studies linking use frequency to perceived job transformation within the next three years (Future For Work Institute, 2024).

In order of preference, users were most willing to delegate these tasks to Microsoft 365 Copilot: finding information (84.1%), summarizing documents (83.5%) and drawing conclusions (71%). Although 56.8% of users believe that Microsoft 365 Copilot enhanced creativity, it is not one of the tasks they would delegate most (36.4%). Nor would they delegate planning their day (32.4%).

Delegation of tasks to Microsoft 365 Copilot

84.1%	**Finding information**
83.5%	**Summarizing documents**
71%	**Drawing conclusions**
35.4%	**Improving creativity**
32.4%	**Day planning**

A longer study is needed to assess habit changes. However, Viva Insights data comparing licensed employees to a control group (using metrics on collaboration dynamics like meetings, concentration, use of email, Teams, etc. from October-December 2023 vs. 2022) showed improved quality concentration time (1+ hour blocks without digital interruptions) for licensed users (+9%) versus the control group (-2%). This pattern was more pronounced for leadership: +12% for licensed users vs. -1% for the control group.

While this change cannot be directly attributed to licensing, it is a notable trend warranting future monitoring. ∎

Impact on
work quality

Microsoft 365 Copilot achieved a 16.2% improvement in result quality based on experimental analysis using an evaluation rubric. Results from applications showing no quality improvement, specifically Excel due to its low maturity level, were excluded to avoid inaccuracies. This improvement aligns with employee perceptions in surveys. Key quality improvements were originality, with a 28% boost; analytical thinking, with a 23.5% improvement and design, with a 22% increase compared to control group deliverables. Writing is also enhanced, although to a lesser extent, with a 10% improvement and communication of ideas by 11%.

Again, these results align with the quality increases of 18% evidenced in the experiment of Noy et al (2023) and 40% in that of Dell'Acqua et al (2023).

Notably, in all experiments, some users failed to review Microsoft 365 Copilot-generated results, indicating overreliance on its content, quality and accuracy. This overreliance is being studied in various investigations, with Passi, S. and Vorvonerau, M. (2022) finding it can revert to distrust in AGI outcomes.

Impact on employee experience

A total of 61.9% of licensed users stated that they would not like to go back to working without Microsoft 365 Copilot. This desire increases over time as users become more familiar with the tool. They indicated that they would be disappointed if they could not use it, although this would not be a reason to leave the company.

Users recommend Microsoft 365 Copilot with an NPS of 67%, five points below the first measurement, which may be due to an adjustment of expectations, as users know the tool better in this second measurement. Greater use of Microsoft 365 Copilot correlates with better recommendations. The most recommended applications are Microsoft 365 Copilot Business Chat and Microsoft 365 Copilot in Teams.

Application	% app usage	NPS Copilot	Copilot adoption rate
Microsoft 365 Copilot Business Chat	NA	81.9%	NA
Microsoft Teams	90.8%	72.2%	65%
Word	54.9%	65.8%	29%
Outlook	89.8%	53.3%	38%
PowerPoint	55.4%	32.25%	18%
OneNote	39.5%	17.1%	0%
WhiteBoard	7.1%	5.7%	NA
Excel	70.7%	2.8%	6%
Loop	3.6%	-0.1%	0%

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Perception of use and participant experience

Both groups use the tool with confidence and ease. Licensed participants feel motivated and productive (61.3%), although this decreases from the first to the second survey. In addition, they are frustrated when Microsoft 365 Copilot does not work (46.6%). Unlicensed participants are curious about the tool (95.5%) and frustrated about not having it when working with licensed people (15.4%).

Licensed participants believe Microsoft 365 Copilot will help them the most to improve efficiency (49%), learn faster (14%) and cut down on time spent in meetings (14%). They expect it to evolve and improve over time and are confident in the tool's potential to transform the way daily tasks are performed.

Perception of leadership

Leaders feel that in the future there will be changes in the roles and functions of current organizational structures (90.5%) and that people in leadership roles must be references and lead the integration of generative AI in day-to-day operations (90.5%), as they must exemplify the necessary change in habits and ways of working.

They base their perception on three future benefits they anticipate from integrating Microsoft 365 Copilot into their day-to-day operations: increasing team productivity (72%), avoiding repetitive tasks (46%) and making processes more efficient (45%).

They consider that the most relevant skills that teams should develop to develop and leverage AGI tools such as Microsoft 365 Copilot are curiosity and continuous learning (26%), AI and data management (19.1%) and creative thinking (15.5%). ■

04
Conclusions

Our study shows that implementing generative artificial intelligence tools, such as Microsoft 365 Copilot, significantly impacts the efficiency, quality and experience of employees in a corporate environment. Over the four months of experimentation, we observed that this technology streamlines routine tasks, enhances the quality of deliverables and enriches the work experience.

Additionally, we found an average savings of 121 gross minutes per week in task management, translating into a tangible productivity boost. Adjustment factors for these savings help quantify the results in terms of productivity and well-being. Moreover, there is a 16% increase in the quality of work and over 60% of licensed users expressed a preference to continue using Microsoft 365 Copilot, noting its positive impact on their sense of safety, peace of mind and motivation.

This study underscores the importance of effective and intensive change management, including pragmatic training, clear communication, and ongoing community support. These three elements are crucial to maximizing adoption, integration into daily operations, and leveraging generative AI tools in corporate settings to evolve work methods and personal habits. ∎

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05
Considerations and future directions
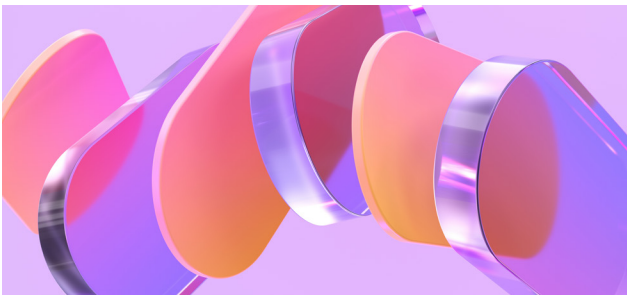
Despite promising results, the study has several considerations to take into account:

1. Generalization of results: the evidence was gathered in a specific corporate context (Repsol) and may not be directly applicable to other industries or organizational cultures. Future studies should include various sectors, companies of different sizes and degrees of digital maturity. Collaboration between researchers from diverse disciplines and industry professionals will enhance generative AI design and implementation strategies.

2. Study duration (four months): adaptation to new technologies and transformation of work practices takes time. Future research should extend observation periods for more comprehensive data.

3. Deeper analysis of emotions, perspectives and leadership is needed to understand how generative AI tools affect employee experience, overall well-being job satisfaction and personal lives.

4. Accurate measurement of the economic return of generative AI, considering not only productivity and efficiency, but also implementation and maintenance costs.

5. During the first two months of the study, the preliminary version of Microsoft 365 was used. It is expected that, in future research, continued product development will have a positive impact on adoption rates, usage intensity and the number of use cases of the product.

These considerations suggest that, while the results are promising, they should be interpreted cautiously. Future studies should address these limitations with longer observation periods, larger and more diverse samples and testing in varied organizational contexts.

Future results, in addition to enriching the academic and practical understanding of generative AI, will also guide the development of more effective policies and strategies for its implementation in the business world, ensuring that these technologies are used in ways that benefit individuals, teams, organizations, and society. ∎

06
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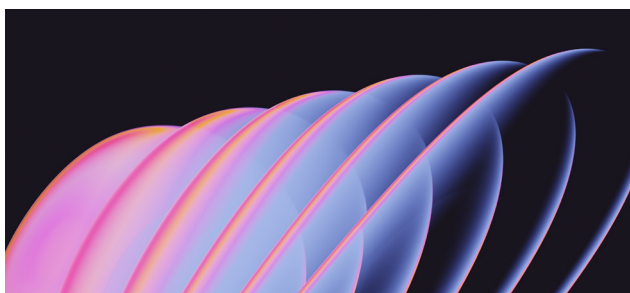
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