



NARODOWE CENTRUM NAUKI

OPUS-28

Wniosek o finansowanie projektu badawczego

[wydruk roboczy]

Badanie skrzynek z łupami w grach wideo:
zrozumienie, wpływ i regulacja

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WNIOSEK NOWY/POWTÓRZONY

Czy wniosek obejmujący zadania badawcze pokrywające się z zadaniami wskazanymi w niniejszym wniosku był składany w poprzedniej edycji konkursu OPUS?

NIE

INFORMACJE PODSTAWOWE

Tytuł w języku polskim	Badanie skrzynek z łupami w grach wideo: zrozumienie, wpływ i regulacja
Tytuł w języku angielskim	Investigating Loot Boxes in Video Games: Understanding, Impact, and Regulation
Słowa kluczowe w języku polskim	Skrzynki z łupami; zachowanie problematyczne; uzależnienie od gier
Słowa kluczowe w języku angielskim	Loot box; problematic behaviour; gaming addiction
Czas realizacji [w miesiącach]	36
Obszar badawczy	HS - Nauki Humanistyczne, Społeczne i o Sztuce
Panel dyscyplin	HS4 - Jednostka, instytucje, rynki
Pomocnicze określenia identyfikujące	HS6_16 - Socjologia kultury i komunikacji społecznej (w tym: medioznawstwo, dziennikarstwo, komunikacja internetowa) HS4_08 - Ekonomia behawioralna, konsumpcja i zachowania konsumentów, marketing

STRESZCZENIE [w języku angielskim]

This research project investigates the psychological, behavioral, and social dynamics of in-game microtransactions, focusing on loot boxes—a monetization mechanism in video games often compared to gambling. The project aims to understand how loot boxes influence consumer behavior, including compulsive spending and gambling-related behaviors, and to provide evidence-based insights for regulatory and industry practices. This interdisciplinary study integrates theories from marketing, psychology, and communication to address pressing concerns about the potential harms of these mechanisms, particularly their impact on vulnerable populations such as children and problem gamblers.

The project is structured around three key studies. The first study categorizes loot boxes and explores consumer motivations for their purchase, employing qualitative methods such as netnography and in-depth interviews. The second study investigates the mechanisms linking loot boxes to gambling behaviors, focusing on how in-game communication and individual differences influence gambling-related intentions. The third study employs experimental methods to pinpoint the characteristics of loot boxes that are most likely to encourage excessive gambling, such as randomized rewards and the use of virtual currency. These findings will provide actionable insights for policymakers, enabling the development of regulatory frameworks to protect consumers while promoting ethical practices within the video game industry.

The project leverages the expertise of a multidisciplinary team, combining advanced quantitative methods, qualitative analysis, and experimental research designs. It is guided by Associate Professor Bruno Schivinski, a leading scholar in consumer behavior and digital media studies, with a proven track record of impactful research and collaborations with industry and policymakers.

The research findings are expected to make significant contributions to the academic understanding of in-game microtransactions while offering practical solutions to mitigate their potential harms. The outcomes will also inform industry self-regulation and provide tools for consumer education, ultimately fostering safer and more ethical gaming environments.

WNIOSKODAWCA

Status wnioskodawcy	1. Uczelnia
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PODMIOTY REALIZUJĄCE

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OPIS SKRÓCONY

[w języku angielskim]

INVESTIGATING LOOT BOXES IN VIDEO GAMES: UNDERSTANDING, IMPACT, AND REGULATION

1. SCIENTIFIC GOAL OF THE PROJECT

The video game industry has become one of the most influential entertainment sectors worldwide, connecting millions of players. Alongside its growth, new monetization models have emerged, raising both ethical and regulatory concerns. Among these, loot boxes, virtual containers offering randomized rewards purchasable with real or in-game currency, are especially controversial. Their structure mirrors gambling in many aspects, such as uncertainty, financial risk, and psychological manipulation. This project seeks to investigate loot boxes' mechanisms and their impact on player behavior, focusing on their potential to encourage compulsive spending and gambling-like tendencies.

The primary goal of this project is to provide a comprehensive understanding of loot box dynamics, with a particular emphasis on their psychological and behavioral effects. Through rigorous interdisciplinary research, the project aims to uncover the motivations behind loot box purchases, identify their most problematic features, and establish evidence-based recommendations to inform regulation and ethical industry practices. By addressing these concerns, this project responds to urgent calls from policymakers, researchers, and the general public for a deeper exploration of this phenomenon.

The project is guided by three central research questions:

1. What motivates individuals to purchase loot boxes, and how do these motivations vary across different demographic groups?
2. How do specific features of loot boxes, such as randomized rewards and time-limited offers, influence consumer behavior and contribute to gambling-like tendencies?
3. What role does in-game communication and advertising play in shaping player behavior toward loot boxes?

To answer these questions, the project posits several hypotheses:

- Players' motivations for engaging with loot boxes are driven by a combination of psychological, social, and economic factors.
- Certain design features, such as randomization and virtual currency, are significant contributors to problematic behaviors.
- In-game communication, including advertising, acts as a trigger for compulsive spending and gambling-related tendencies.

2. SIGNIFICANCE OF THE PROJECT

State of the art: Loot boxes have become a prevalent feature in modern video games, serving as a significant revenue stream for developers. These virtual containers, offering randomized rewards, share structural similarities with gambling mechanisms, raising concerns about their potential harms (Griffiths, 2018; Zendle & Cairns, 2019). Despite their widespread use, the academic exploration of loot boxes is still in its early stages. Much of the existing literature remains theoretical, emphasizing shared principles between loot boxes and gambling—such as randomization, near-miss effects, and uncertainty—without robust empirical validation (Drummond & Sauer, 2018; Macey & Hamari, 2018).

Initial studies have linked loot box engagement to gambling-related behaviors, with findings indicating a correlation between loot box expenditure and problem gambling (Zendle et al., 2020; Drummond et al., 2019). However, these studies are limited by small sample sizes and correlational approaches, which hinder their ability to establish causation. Furthermore, there is insufficient research addressing the broader implications of loot boxes, including their psychological impact, ethical concerns, and influence on consumer behavior across various demographic groups (McCaffrey, 2019; King et al., 2019).

This gap in empirical evidence has led to inconsistent regulatory approaches globally. While some countries, such as Belgium and the Netherlands, have implemented bans or regulations on loot boxes (Geens, 2018; Netherlands Gaming Authority, 2018), others, like Poland, the United Kingdom, and Australia, remain hesitant to act due to a lack of comprehensive data (Parliament of Australia, 2018; Victorian Responsible Gambling Foundation, 2018). Vulnerable populations, particularly children and individuals predisposed to addictive behaviors, are disproportionately affected, yet research into their specific experiences with loot boxes remains limited (Bestman et al., 2015; Hing et al., 2014).

Justification for tackling the problem: This project aims to fill the gaps in knowledge by systematically examining the mechanisms and impacts of loot boxes. By employing a mixed-methods approach, it will provide detailed insights into the psychological, social, and economic factors that drive loot box engagement. The findings will serve as a critical resource for policymakers, industry leaders, and consumer advocates,

enabling the development of regulations and practices that protect players while maintaining the creative and economic vitality of the gaming industry.

Countries such as Belgium and the Netherlands have classified loot boxes as gambling and implemented strict regulations. In contrast, other nations, including Poland and the United States, have yet to take decisive action, citing insufficient evidence. The controversy surrounding loot boxes has escalated, with reports linking them to compulsive spending, problem gambling, and financial exploitation. Addressing this gap in empirical knowledge is essential to protect vulnerable populations and establish a consistent regulatory framework.

Loot boxes represent a rapidly growing concern for policymakers, researchers, and consumer advocates due to their structural similarities with gambling and their potential for financial and psychological harm. These mechanisms, often embedded within highly engaging gaming environments, leverage psychological principles such as variable reward schedules and near-miss effects to encourage repeated purchases (Griffiths, 2018; Drummond & Sauer, 2018). This creates significant risks, particularly for vulnerable populations like children and individuals predisposed to addictive behaviors (Bestman et al., 2015; Zendle & Cairns, 2019).

Despite their prevalence, loot boxes occupy a regulatory grey area in many jurisdictions. Belgium and the Netherlands, have taken decisive action by classifying loot boxes as gambling and banning them outright (Geens, 2018; Netherlands Gaming Authority, 2018). However, other nations, including Poland, have hesitated to enact similar restrictions, citing insufficient empirical evidence to support such measures. The lack of transparency surrounding loot boxes exacerbates these challenges. Many games fail to disclose the odds of obtaining specific rewards, leaving players unaware of the financial risks they are taking (McCaffrey, 2019). Moreover, marketing strategies often target young players through in-game advertisements, peer influence mechanisms, and limited-time offers, further amplifying the risks (Hing et al., 2014; King et al., 2019). Without clear guidelines or accountability, the gaming industry continues to operate in a way that prioritizes revenue generation over ethical considerations.

Pioneering nature and impact: This project is groundbreaking in its application of an integrated, interdisciplinary methodology to study loot boxes, combining qualitative, quantitative, and experimental approaches. Unlike prior research, which has been fragmented or heavily theoretical, this project systematically investigates the mechanisms of loot boxes and their effects on player behavior, providing a comprehensive empirical foundation. By addressing structural features such as randomized rewards, near-miss effects, and in-game communication, it identifies how these elements influence consumer behavior and their potential to cause harm.

The focus on vulnerable populations, particularly children and individuals with predispositions to addictive behaviors, adds a significant societal dimension to the research. By targeting these groups, the project aligns with urgent policy needs, offering actionable insights for protective measures tailored to at-risk players. This also positions the project as a critical resource for regulatory bodies seeking evidence-based interventions to address inconsistencies in global regulatory practices.

Moreover, the project advances ethical innovation by engaging with industry stakeholders to explore how ethical game design can coexist with commercial success in Poland and abroad. Through this collaboration, it aims to set benchmarks for responsible gaming practices, ensuring that consumer protection becomes an integral part of game development while preserving the industry's creative and economic potential. The findings will not only inform academic discourse across disciplines but also contribute to shaping a more transparent, equitable, and ethical gaming ecosystem.

Impact of the project results on the development of the research field and scientific discipline: The results of this project will significantly advance the understanding of consumer behavior in digital environments, specifically within the emerging context of monetization mechanisms like loot boxes. By addressing key gaps in the literature and providing empirical evidence on their psychological and behavioral impacts, the project will contribute to the development of multiple academic disciplines, including marketing, psychology, and digital media studies. In marketing, the findings will deepen the understanding of how gamified mechanisms influence consumer decisions, particularly under conditions of uncertainty and risk. This knowledge will enhance theoretical frameworks around consumer engagement, behavioral economics, and persuasive design, laying the groundwork for future research on monetization strategies in digital ecosystems. Furthermore, the project's exploration of the structural similarities between loot boxes and gambling will advance discussions on addiction and compulsive behaviors. By identifying the mechanisms that drive problematic gaming behaviors, the project will offer new insights into the psychological underpinnings of digital engagement, contributing to broader studies on human decision-making and reward systems.

Beyond academia, the project's findings will guide evidence-based policymaking, addressing inconsistencies in global regulatory approaches to loot boxes. By providing actionable recommendations, the research will support the development of consumer protection frameworks that balance ethical practices with industry innovation, ultimately benefiting both the gaming community and broader societal interests.

3. CONCEPT AND WORK PLAN

General work plan: This project is structured into three distinct yet interconnected phases over three years, ensuring a systematic investigation of loot boxes. Each phase addresses specific research objectives while building cumulatively toward a comprehensive understanding of the phenomenon.

Year 1: Qualitative exploration. The first year focuses on exploring player motivations and developing a taxonomy of loot boxes. This involves securing ethical approvals, conducting an extensive literature review, and recruiting participants from diverse gaming communities. Using netnography, interviews, and focus groups, qualitative data will be collected and analyzed thematically to uncover patterns in player interactions and categorize loot box types.

Year 2: Quantitative examination. The second year transitions to quantitative methods, leveraging insights from the qualitative phase. A large-scale survey will be designed to examine relationships between player characteristics, marketing strategies, and loot box engagement. Data collected from a broad sample will be analyzed using Structural Equation Modeling (SEM) to identify causal pathways and behavioral mediators.

Year 3: Experimental validation. The final phase employs experimental methods to validate findings from the earlier phases. Controlled experiments will test the effects of loot box features, such as randomization and virtual currency, on player behavior. Findings will be synthesized to create actionable insights, culminating in academic publications, policy briefs, and educational resources.

Specific research goals:

The project will:

- Develop a detailed taxonomy of loot box types, categorizing them by their design features and functionality.
- Investigate the underlying motivations for loot box purchases, considering emotional, social, and economic factors.
- Analyze the role of demographic and psychological factors in shaping player behavior.
- Assess the impact of in-game communication on gambling-related intentions and behavior.
- Identify design features, such as randomization and time-limited offers, that are most likely to lead to compulsive spending and gambling tendencies.
- Inform policy and practice by producing evidence-based recommendations for regulators and industry stakeholders to promote ethical gaming practices and consumer protection.

Preliminary research results:

This project is a direct continuation of the IDUB CUPRUM project, a funded research initiative from Politechnika Gdańska with a budget of over 280,000 PLN. CUPRUM served as a foundation for this proposal by exploring the psychological and behavioral dimensions of digital consumer behavior, with particular emphasis on gaming environments. The success of the CUPRUM project not only validated the feasibility of the proposed research methodologies but also highlighted the urgent need to expand the scope of inquiry into loot boxes. Under CUPRUM, an extensive literature review was conducted to explore the theoretical and empirical intersections of loot boxes, gambling behaviors, and digital engagement. This review identified key research gaps, particularly in understanding how specific design features of loot boxes interact with player characteristics to influence behavior. These insights formed the conceptual backbone for the current proposal, ensuring it is firmly grounded in the state-of-the-art knowledge.

The CUPRUM project also tested the effectiveness of various methodologies. For instance, netnography and thematic analysis were employed to explore player motivations, providing valuable qualitative insights into the psychological triggers of loot box engagement. Additionally, pilot surveys demonstrated the applicability of advanced statistical techniques for examining behavioral predictors. The initial findings confirmed the viability of a mixed-methods approach, combining qualitative exploration, quantitative analysis, and experimental validation.

Building on CUPRUM's achievements, this project aims to expand the research to a broader and more complex scope. By leveraging the knowledge, tools, and preliminary results developed during CUPRUM, this proposal is well-positioned to address critical gaps in the literature and provide actionable insights for academia, policymakers, and industry stakeholders. The continuity and proven methodologies ensure that the current research will deliver significant academic, practical, and societal contributions.

Additionally, the Senior Researcher's previous work, including the SMART GAMING Initiative, has demonstrated the feasibility of employing mixed-methods research to examine digital consumer behavior. This

initiative successfully combined qualitative insights with large-scale quantitative analysis, reaching over 500,000 gamers globally. A similar approach to research and social impact will be implemented in this project.

Research programme and risk analysis:

The project follows a detailed research timeline:

- Year 1: Obtain ethical clearances, conduct qualitative research, and initiate preliminary data analysis.
- Year 2: Administer large-scale surveys, perform advanced statistical modeling, and disseminate initial findings.
- Year 3: Conduct experimental studies, engage with stakeholders, and finalize project outputs.

Table. Project lifecycle (duration: 36 months)

RESEARCH PROJECT LIFECYCLE	1-12 months				13-24 months				25-36 months			
#1. Preparatory phase, protocols, ethics; Ph.D. recruitment												
#2. Website and online communication channels												
#3. Design and pre-test the qualitative study												
#4. Qualitative research; analysis; summary of the findings												
#5. Prepare the quantitative cross-sectional survey												
#6. Pre-test the quantitative tools												
#7. Journal article #1. Research dissemination #1												
#8. Wave #1 of quantitative data collection (n=2,000)												
#9. Journal special issue. Conference 1. End of Year 1												
#1. Analysis of quantitative data: Wave #1												
#2. Preparation of Journal article #2												
#3. Research dissemination #2. Conferences #2												
#4. Design field experiments (quantitative methods)												
#5. Pre-test the experimental tools. End of Year 2												
#1. Wave #2 of data collection (n=2,000)												
#2. Analysis of quantitative data: Wave #2												
#3. Preparation of Journal article #3												
#4. Research dissemination #3. Conferences #3												
#5. Preparation of reports. Close the project												

To ensure the project’s success, a robust risk mitigation plan has been developed, addressing potential challenges across all research components. The plan includes strategies for participant recruitment, data integrity, ethical compliance, and methodological rigour. Hence, (1) ensuring a diverse and representative sample is critical to the project’s validity. Recruitment will be diversified through partnerships with gaming communities, forums, and social media platforms, alongside traditional methods like email invitations to academic networks. Special care will be taken to engage vulnerable populations, such as younger players while adhering to strict ethical guidelines to safeguard their participation; (2) participant responses may be influenced by social desirability or recall bias, particularly in self-reported data. To address this, the project will include a mix of self-reported and observed behavioral data, triangulating findings across qualitative, quantitative, and experimental phases. Data will undergo rigorous validation procedures, including cross-checking responses, employing attention-check questions in surveys, and using randomized control in experiments to minimize bias; (3) working with vulnerable populations, such as minors, poses ethical considerations. Comprehensive ethical approvals will be secured, and all activities will comply with institutional and legal guidelines. Informed consent and confidentiality protocols will be strictly enforced, ensuring participant safety and data privacy.

4. Research Methodology

Scientific approach: The project employs a mixed-methods design to provide a comprehensive understanding of loot boxes, integrating qualitative, quantitative, and experimental approaches. Each phase builds upon the insights of the previous one, progressing from exploratory qualitative research to broader quantitative analysis and culminating in experimental validation. This design ensures a multi-faceted exploration of the research objectives, enabling both depth and generalizability.

Methods and techniques:

1. **Qualitative research (Year 1):** This phase aims to explore player motivations, perceptions, and experiences with loot boxes. 30 in-depth interviews and 3 focus groups (with 8-10 participants each) will be conducted, targeting a diverse sample of players varying in age, gender, and gaming habits. Additionally, a netnographic analysis of five active gaming forums will uncover community discussions

about loot boxes, focusing on shared experiences, emotional responses, and perceived value. **Estimated outcomes:** This phase will produce a thematic understanding of player motivations and the development of a loot box taxonomy based on structural features, such as randomized rewards, virtual currency use, and time-limited offers. These findings will guide the design of the subsequent survey.

2. **Quantitative analysis (Year 2):** Using the insights from the qualitative phase, a survey will be developed and administered to 1,000 participants across diverse demographics. The survey will include validated scales for measuring impulsivity, risk tolerance, and gambling behaviors, as well as custom items to assess loot box engagement. Structural Equation Modeling (SEM) will be employed to identify relationships between demographic variables, psychological traits, and loot box behaviors. Recruitment will leverage online gaming platforms, social media, and academic networks to ensure a representative sample. **Estimated outcomes:** The quantitative phase will identify significant predictors of loot box engagement, such as personality traits, marketing exposure, and social influences. SEM will reveal causal pathways, providing a framework to test experimentally.
3. **Experimental studies (Year 3):** This phase will validate the findings from the earlier phases by testing specific loot box features in controlled environments. 200 participants will interact with simulated loot boxes, designed to include key features such as randomization, virtual currency, and time-limited offers. Behavioral metrics like spending patterns, response times, and decision-making processes will be collected alongside self-reported emotional responses. Experiments will be conducted in laboratory settings or via online platforms for accessibility. **Estimated outcomes:** Experiments will identify the specific loot box features most likely to promote compulsive behaviors and gambling-like tendencies. Results will validate causal links established in the quantitative phase and refine recommendations for policymakers and industry stakeholders.

Tools and Equipment: The project will utilize state-of-the-art software for data collection and analysis. The research team has access to the artifacts needed to successfully complete this project. No additional tools or equipment will be needed nor purchased for this project.

Data analysis: Qualitative data will undergo thematic analysis to uncover recurring patterns and trends. Quantitative data will be analyzed using SEM to explore causal relationships and test hypotheses. Experimental data will employ statistical techniques based on regression modeling to evaluate the effects of loot box features on behavior. Triangulation across phases will enhance the validity and reliability of findings.

Estimated outcomes of the research. The project will produce:

- A detailed taxonomy of loot boxes, categorizing their structural features and user interactions.
- An evidence-based understanding of how psychological traits and marketing strategies influence loot box engagement.
- Experimental validation of the behavioral effects of specific loot box features, offering actionable insights for regulatory frameworks.
- Academic publications, policy briefs, and educational materials targeting consumers, policymakers, and industry stakeholders.

5. Research team

The research team brings together a highly skilled group of scholars with complementary expertise in marketing, psychology, and consumer behavior research, ensuring a robust and interdisciplinary approach to the project. This team has a proven track record of successful collaboration, including the CUPRUM project and other high-impact initiatives, demonstrating their ability to deliver complex research objectives.

Principal Investigator: dr hab. inż. Magdalena Brzozowska-Woś. Associate Professor Brzozowska-Woś is an accomplished marketing scholar with extensive expertise in both qualitative and quantitative research methodologies. Her work focuses on consumer behavior and digital marketing, with a particular interest in interdisciplinary approaches. She has published widely and has co-led several research projects, including CUPRUM, where she collaborated with Schivinski. As PI, Dr. Brzozowska-Woś will oversee the project's implementation, ensuring integration across research phases and adherence to objectives.

Senior Researcher: Professor Bruno Schivinski. Schivinski, an Associate Professor at RMIT University, is a globally recognized expert in digital media, consumer behavior, and problematic gaming practices. He has led high-profile initiatives in the video game industry. His expertise in mixed methods and statistical modeling will guide the design, analysis, and dissemination of findings. Schivinski's international collaborations and experience with academic-industry partnerships ensure the project's relevance and impact.

Executor: dr hab. Edyta Andrzejak-Gołąb. Associate Professor Andrzejak-Gołąb specializes in qualitative methodologies, including netnography and thematic analysis. Her expertise in exploring consumer motivations and perceptions will be critical during the qualitative phase of the project. She will lead data collection and analysis in this phase, ensuring high-quality insights to inform subsequent quantitative and experimental work.

Additional team members. Scholarship Recipients (PhD Candidate): A full-time PhD student with a background in behavioral research will be recruited to assist with data collection, management, and analysis

across all phases of the project. They will receive training in advanced methodologies, ensuring their active contribution to project outcomes.

International mentors: Professors Mark Griffiths (Nottingham Trent University) and Cristian Montag (University of Ulm) will provide guidance on gambling research and behavioral analysis. Their involvement will bridge academic knowledge with industry and policy applications, enhancing the global impact of the project. This team combines exceptional academic expertise, proven research experience, and an established network of collaborators, ensuring the project's success and its contribution to both academic and societal advancements.

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OPIS SZCZEGÓŁOWY

[w języku angielskim]

INVESTIGATING LOOT BOXES IN VIDEO GAMES: UNDERSTANDING, IMPACT, AND REGULATION

SCIENTIFIC GOAL OF THE PROJECT

Contribution and significance of the research problem

‘Microtransaction’ is an umbrella term that covers a wide range of purchases embedded inside video games. This controversial practice is rapidly growing and has been described as exploitative and even illegal.⁴ In 2023, the video game industry apparently generated over \$30 billion in microtransactions¹², typically presented within online games as ‘loot boxes’, virtual items that can be exchanged for a randomized choice of further virtual items^{15,16}. In purchasing a loot box, consumers engage in a gambling-like practice³, not knowing in advance what virtual items they are going to receive or if the value of the items will be relative to the purchase price. Legislators in several other countries have called for research that may inform the development of a system for regulating this emergent business model particularly the versions that are considered to promote online gambling^{4,5}.

Microtransactions are defined as “a business model where users can purchase virtual goods via micropayments, and may include downloadable content such as story extensions, additional playtime, levels, new maps, virtual currency, weapons, armour, characters, or cosmetic items to customize the player’s character or items. The player pays either directly with real-world currency or with some form of virtual currency. The latter is typically earned during gameplay or can (often alternatively) be purchased with real-world money”^{11(p. 18)}. Most commonly, microtransactions are presented within online games as ‘loot boxes’, consumable virtual items that can be exchanged for a randomized choice of further virtual items^{15,16}. The key and most controversial element of loot boxes is their randomization. Moreover, the most desirable rewards are usually rare and are likely to be acquired by continually opening loot boxes, which in turn involves significant game time and/or money³.

Major game companies, including Electronic Arts and Ubisoft, have been widely criticized for increasingly relying on the implementation of loot boxes in their franchise game titles, such as FIFA, Assassin’s Creed, and Star Wars: Battlefront¹³ to increase revenue¹⁴. Both scholars and legislators agree that i) the reward to be won when consumers buy unknown and randomized virtual goods should be of the same financial value or greater than the money spent^{3,17}, and ii) randomized systems of rewards are predatory and share the characteristics of gambling, which in turn may drive loss of control, problem gambling, and addictive spending^{3,18}.

A problem of major concern is that in cases of alleged consumer exploitation, vulnerable groups (e.g., children and problem gamblers) may be victimized and be the targets for randomized systems of rewards such as loot boxes¹⁶. For instance, vulnerable consumers may overspend or even spend money they cannot afford^{3,18}. Based on these principles, scholars and legislators are claiming that the video games industry should be monitored and regulated just like online casinos³ when implementing gambling-like mechanisms such as loot box in video games, particularly when real money is used to purchase them. This project generates robust insights to address these important issues.

Although the literature on microtransactions is rapidly accumulating, to date scholars have mainly advanced theoretical propositions on what delineates the mechanisms of loot boxes and their hypothesized relationship with problem gambling^{3,4,16,19}. The very few empirical articles investigating loot boxes (i) partially support theoretical propositions indicating a correlation between expenditure in loot boxes and problem gambling¹⁵; and (ii) reveal that opening loot boxes generates an excitement for consumers similar to that felt by gamblers when they win on poker machines²⁰. Although there are some initial indications that particular properties of loot boxes may have harmful

or negative effects, the literature is inconclusive, with researchers questioning whether contemporary gaming mechanisms and problem gambling are fundamentally connected²¹.

The sparsity of robust scholarly evidence limits our understanding of the ways consumers perceive and are influenced by the mechanics of loot boxes, therefore limiting policymaking and the regulation of in-game microtransactions. The proposed project addresses this gap in knowledge. Furthermore, the findings could inform and influence industry practice to protect consumers (especially vulnerable groups); for instance, some game developers are interested and willing to make changes to avoid consumer harm (e.g., cutting connections to outside game exchange of virtual items that can be potentially gambled)³⁶.

In Poland and elsewhere, politicians and policymakers have responded to the public and media by holding hearings, publishing studies, and drafting regulatory legislation concerning in-game microtransactions. However, due to (i) the novelty of this business model, and (ii) the lack of empirical peer-reviewed research demonstrating consumer responses towards microtransactions and how these responses may relate to gambling, legal opinion and regulatory actions are fragmented across countries, preventing a systematic or consistent policy and regulatory response. For instance, in Belgium, Japan, and the Netherlands randomised systems of rewards are considered gambling, and there are policies that ban such practices^{22–24}. On the other hand, in Sweden, the UK, and New Zealand, this business model is not seen as gambling, and the policies are loose or not legally enforced¹¹. In Poland, while microtransactions involving randomised systems of rewards are considered gambling and may be harmful, no policies have been implemented and the authorities require further investigation before taking any action^{5,18}. Understanding the implications of microtransactions is paramount to inform appropriate and adequate regulation/policy change and industry/practice change to protect consumers.

This project addresses this important issue, contributing to a clear gap in the scholarship and a key political and industry challenge through: a) **developing empirical insights to expand our understanding of consumer responses to microtransactions**; and b) **contributing to evidence-based knowledge that can be used by regulators to develop appropriate policy to adequately protect consumers from harm**.

The project is guided by three central research questions (RQs):

RQ1: What motivates individuals to purchase loot boxes, and how do these motivations vary across different demographic groups?

RQ2: How do specific features of loot boxes, such as randomized rewards and time-limited offers, influence consumer behavior and contribute to gambling-like tendencies?

RQ3: What role does in-game communication and advertising play in shaping player behavior toward loot boxes?

The project will achieve this through the following five research objectives (ROs).

RO1: To understand and categorize types of loot boxes and the reasons why consumers buy them;

RO2: To determine whether and how buying loot boxes drives commercial gambling and problem gambling;

RO3: To understand how specific in-game communication (advertising) influences gambling-related intentions and behaviour;

RO4: To determine how differences in consumer demographics, attitudes, and perceptions influence the relationship to gambling-related intentions/problems and loot box purchasing behaviour; and

RO5: To establish factors of in-game microtransactions leading to excessive gambling.

To answer these questions, the project posits key research hypotheses:

- Players' motivations for engaging with loot boxes are driven by a combination of psychological, social, and economic factors.
- Certain design features, such as randomization and virtual currency, are significant contributors to problematic behaviours.
- In-game communication, including advertising, acts as a trigger for compulsive spending and gambling-related tendencies.

The **originality** of this project is threefold. First, this is basic research that aims to cover the outlined gaps in the literature and therefore, substantially deepen our understanding of in-game microtransactions (loot boxes). Second, the project is differentiated from past empirical studies on loot boxes by both its interdisciplinary standpoint and research objectives. The project benefits from the expertise of the research team and experts in marketing and psychology. This intersection is highly relevant, as the microtransaction mechanisms, more specifically loot boxes, depend on ways of eliciting and engaging consumers into action (advertising and marketing), which in turn, interact with individual differences (psychology) leading to behaviour (marketing and psychology). Third, the project will be the authoritative study to inform policy/industry change on how consumers react to loot boxes mechanisms.

CLARITY OF HYPOTHESIS, THEORIES AND RESEARCH QUESTIONS

This proposal comprises **three studies**, which cover the five outlined ROs.

Study #1: To understand and categorize types of loot boxes and the reasons consumers buy them

Studies on microtransactions are based on the rationale that the mechanics of loot boxes work in a similar way to mechanisms that are known to lead problem gambling³. Although the definitions of gambling differ across disciplines, the literature indicates a number of common elements that characterize gambling: (a) there is an exchange involving money (or something of financial value), in relation to a future event where the outcome is unknown; (b) the result of the exchange is determined (partly or wholly) by chance; (c) the exchange of money or something of financial value happens without productive work on either side; and (d) losses can be avoided by not taking part in the exchange³.

In contrast to traditional gambling (e.g., casinos), consumers are able to trade awards from loot boxes with other gamers within an in-game secondary market or through third-party platforms outside of it. Consequently, rewards can be monetised or wagered in online lotteries (although in some cases violating the game publishers' terms and conditions). From a social perspective, it has been observed that consumers sometimes record videos of themselves opening loot boxes and post the videos on social media sites for other viewers' entertainment²⁰. These examples indicate that consumers may be motivated to buy loot boxes for further trading (possibility for profit) or to generate social recognition and interaction. Before determining patterns and causes of behaviour (confirmatory research), it is paramount to explore and uncover the reasons why individuals partake in this activity. This project addresses the calls in the literature for more insights into the full spectrum of, and the motivations for, loot box purchases¹⁹. The core objective of this study is, therefore, to categorise the type of randomized systems of rewards available to date and to understand the reasons why consumers buy them, thus addressing RO1. Furthermore, the knowledge generated during Study 1 will serve as the foundation to test relationships linked to loot box consumption (fieldwork/execution of the ROs is described in the methodology).

Study #2: To identify the mechanisms of in-game microtransactions and their relationship with gambling

ROs 2, 3, and 4 are tailored to address concerns about the potential for microtransactions to pose risks to consumers. Potential risks include, but are not limited to, overspending, normalisation of gambling, and gambling behaviour^{15,21}. At this stage of the project, cross-sectional quantitative research will be undertaken.

Research is needed to investigate whether the theoretical assumptions and hypothesised harms of microtransactions influence problem gambling (RO2)^{e.g.,3,16}. Past studies reported correlations between loot box expenditure and problem gambling¹⁵. Although directional relationships derive from correlations, the opposite may not be true. Hence, the literature indicates that loot box expenditure and problem gambling are linked but fails to indicate a directional dependency among the variables. RO2 builds on both theoretical and empirical evidence to determine whether the consumption of loot boxes influences gambling.

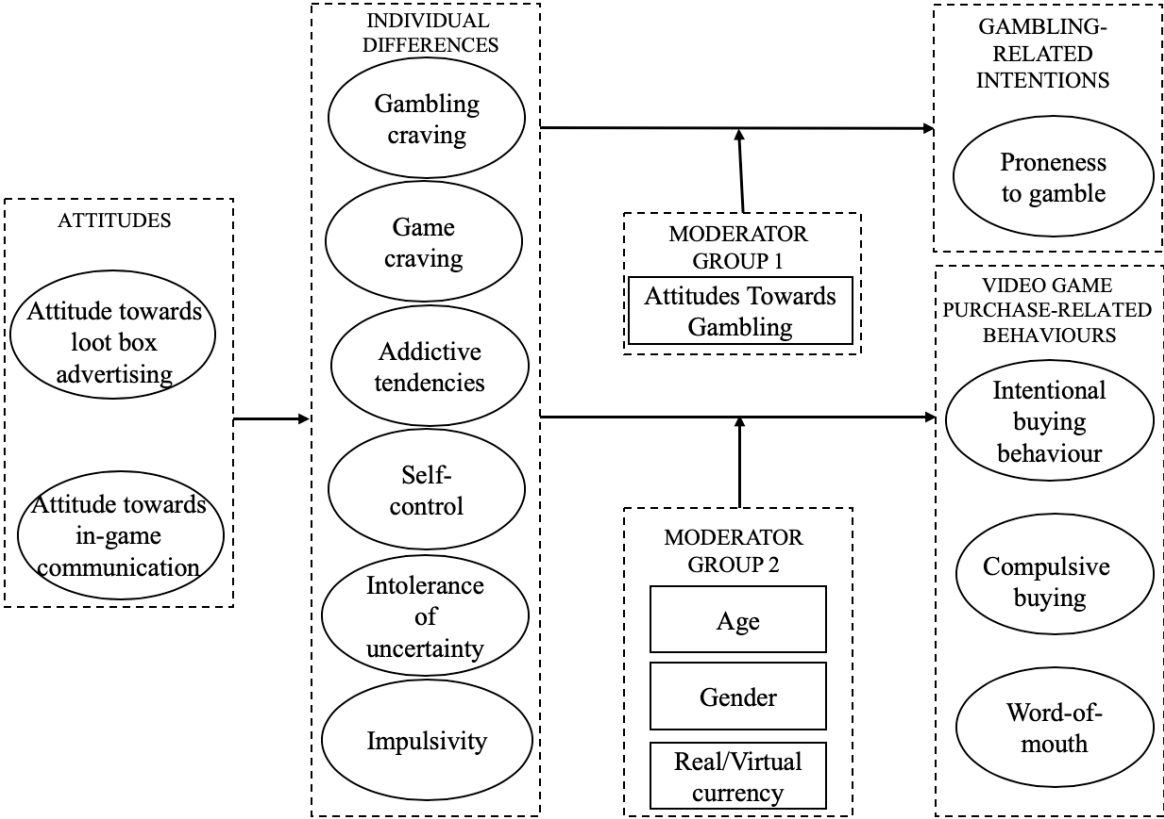
Bearing in mind that there are no clear Governmental regulations on microtransactions, the problem extends to a lack of directives and policies on the use of marketing communication strategies to drive behaviour. RO3 is designed to understand how specific in-game communication (advertising, marketing strategies) influences gambling-related intentions and loot box purchase behaviour. Gambling advertising has become a public concern and the subject of international debate in recent years because of its pervasiveness and penetration into everyday life²⁵. In contrast to TV advertising, which is widely regulated, consumers playing games are subject to numerous uncontrolled advertising stimuli. To illustrate the gravity of the problem, the game 8 Ball Pool by the developer *Miniclip* implemented several reward systems, including watching numerous ads as a form of payment for loot boxes. The developer also uses in-game communication to induce gamers to partake in other paid minigames (to receive more loot boxes), such as spin and win or scratch and win. Although adults, in most cases, are susceptible to this type of advertising, children are even more vulnerable. For instance, research has shown that children as young as five are able to recall gambling brands from ads and associate them with external objects, e.g., their favourite sports teams²⁶. It is therefore possible to say that in-game communication and loot box related advertising may act like advertising and influence consumers to engage in gambling behaviour³⁷.

This research project focuses on internal (individual) and external (peer) behaviour, which may pose risks to consumers^{15,21}. Policymakers and regulators are interested in understanding the underlying mechanisms driving in-game microtransactions (i.e., intentional buying behaviour), and how they lead to overspending (compulsive buying)^{5,18}. Although intentional and compulsive buying can be understood in terms of consumer attitudes, perceptions, and individual differences (see next section), external factors such as the influence of consumers on other peers is highly relevant to this investigation. The marketing literature has demonstrated that consumers' recommendations (word-of-mouth) are perceived by peers as trustworthy, making this type of communication more persuasive than traditional advertising²⁷. Additionally, marketing communication techniques can be easily implemented to generate word-of-mouth²⁸, which may be unscrupulously used by game producers to influence further behaviour.

Finally, RO4 is designed to determine how individual differences influence consumers' gambling-related intentions and video game purchase-related behaviour. Research has evidenced that consumers' individual differences are predictors of behaviour²⁹. This project incorporates key individual differences known to be related to proneness to gambling, gaming and video game behaviours as mediators (refer to Figure 1), which further explain the influence of in-game communications on gambling-related intentions and video game purchase-related behaviours. To explore the circumstances under which those effects may be enhanced/diminished, the above-

mentioned relationships are hypothesized to be moderated by consumer attitudes to gambling, age, gender and type of currency used to purchase loot boxes, for example so that younger males who have positive attitudes towards gambling and who use real currency will be more prone to gamble and purchase loot boxes⁸. Understanding those relationships contributes to the overall scientific knowledge about the mechanism of in-game microtransactions.

Figure 1. Underlying mechanisms of in-game microtransactions



Study #3: To establish factors of in-game microtransactions leading to excessive gambling

After testing for the theoretical direct relationships, mediators, and moderators, the final study of this project is designed to determine the drivers of in-game microtransactions – a necessity for informing the development of regulations and policies. A significant problem facing regulators across the world is that loot boxes come in several different forms. Experimental design research will be implemented to pinpoint which characteristics of loot boxes are more likely to lead consumers to gamble. Table 1 summarizes the conditions of the experimental design research, which encompass the most predominant characteristics of loot boxes linked to excessive gambling³:

Odds known vs. Odds unknown. A key distinction to make among different types of loot boxes is whether they inform the gamers about near misses. Some loot boxes show the consumers the contents of a loot box just after they have purchased it, whereas other loot boxes show gamers a range of rare/valuable items they might have won by purchasing it. Near misses are present in different kinds of gambling. Research has demonstrated that near misses in gambling lead to cognitive distortions by which the consumers think they are more likely to win in future transactions; therefore, they continue gambling³⁰. Such cognitive distortions may be triggered when consumers face near misses generated by the game, inducing further purchases of loot boxes.

Timed race shop vs. Non-timed race shop. Some games will feature timed loot boxes that are available for purchase within a limited amount of time. The loot box's contents changes every few minutes, giving the consumers a sense of excitement and urgency. Timed race shop may be

particularly compelling for problem gamblers, who present singular patterns in neural activity in reward-related brain regions, consequently enhancing their motivation to gamble and engage in the purchase of loot boxes³¹.

Real currency vs. Virtual currency. Loot boxes can be bought directly for money. In many games, loot boxes are paid for using in-game currency. Virtual in-game currency may be bought directly with real currency or received when playing the game (e.g., earned by in-game achievements). Paying with virtual currency is a common feature of online gambling. Consumers lose the sense of real money value when using virtual currency (or any other object that does not have a real-world value, such as casino chips). This is supported by research which indicates that consumers spend more money when they are gambling with chips rather than cash³². Analogous behaviour is expected when buying loot boxes with virtual currency.

Regulative information vs. Non-regulative information. Regulatory organisations such as the Entertainment Software Rating Board (ESRB; USA), the Australian Classification Board (ACB) and the Pan-European Game Information (PEGI) are non-profit organisations that employ self-regulatory measures. PEGI is the most used rating system, which is widely used in at least 37 countries in and around the European Union and serves as a reference for other regulatory organizations. Apart from age rating, PEGI uses content descriptors such as a general label for gambling, which indicates in-game elements that encourage or teach gambling³³. Most recently, PEGI devised a new label for physical and online games specifying the availability of in-game purchase. To date, no official PEGI comment on loot boxes is available. Informed consumers are more likely to deliberate before engaging in in-game microtransactions; or if purchasing, regulations might influence consumers to spend in a more ordered fashion (lowering compulsive behaviour)¹⁶.

Virtual goods known vs. Virtual goods unknown. The key and most controversial element of loot boxes is the randomization of unknown virtual items. Consumers never know what they are going to obtain when opening the loot box. The uncertainty and belief that the expected item will be in the loot box, combined with the above-mentioned mechanical characteristics implemented by the game developers, turns the practice into gambling-like behaviour³. Bearing in mind that the most desirable rewards are usually rare and that gamers will pursue them for several reasons, including competitiveness⁸, we can assume that when virtual goods are known in loot boxes, consumers will only spend money on virtual goods that offer an equivalent financial value^{3,17}. That should in turn reduce, or even nullify, the harmful effects of loot boxes.

Table 1. Experimental design: 4 x 2 within subjects

INDEPENDENT VARIABLES			DEPENDENT VARIABLES	
Conditions of in-game purchase		Type of in-game purchase	Gambling-related intention	Video game purchase-related behaviours
Odds known	Odds unknown	Virtual goods known Virtual goods unknown	Proneness to commercial gamble	Intentional buying behaviour
Timed race shop	Non-timed race shop			Compulsive buying
Real currency	Virtual currency			Word-of-mouth
Regulative information	Non-regulative information			

PRELIMINARY RESEARCH RESULTS

This project is a direct continuation of the IDUB CUPRUM project, a funded research initiative from Gdansk University of Technology (Politechnika Gdańska) with a budget of over 280,000 PLN. CUPRUM served as a foundation for this proposal by exploring digital consumer

behaviour's psychological and behavioural dimensions, with particular emphasis on gaming environments. The success of the CUPRUM project not only validated the feasibility of the proposed research methodologies but also highlighted the urgent need to expand the scope of inquiry into loot boxes. Under CUPRUM, an extensive literature review was conducted to explore the theoretical and empirical intersections of loot boxes, gambling behaviours, and digital engagement. This review identified key research gaps, particularly in understanding how specific design features of loot boxes interact with player characteristics to influence behaviour. These insights formed the conceptual backbone for the current proposal, ensuring it is firmly grounded in state-of-the-art knowledge.

The CUPRUM project also tested the effectiveness of various methodologies. For instance, netnography and thematic analysis were employed to explore player motivations, providing valuable qualitative insights into the psychological triggers of loot box engagement. Additionally, pilot surveys demonstrated the applicability of advanced statistical techniques for examining behavioural predictors. The initial findings confirmed the viability of a mixed-methods approach, combining qualitative exploration, quantitative analysis, and experimental validation.

Building on CUPRUM's achievements, this project aims to expand the research to a broader and more complex scope. By leveraging the knowledge, tools, and preliminary results developed during CUPRUM, this proposal is well-positioned to address critical gaps in the literature and provide actionable insights for academia, policymakers, and industry stakeholders. The continuity and proven methodologies ensure that the current research will deliver significant academic, practical, and societal contributions.

Additionally, the Senior Researcher's previous work, including the SMART GAMING Initiative, has demonstrated the feasibility of employing mixed-methods research to examine digital consumer behaviour. This initiative successfully combined qualitative insights with large-scale quantitative analysis, reaching over 500,000 gamers globally. A similar approach to research and social impact will be implemented in this project.

PROJECT DESIGN, METHODOLOGY, AND IMPLEMENTATION PLAN

To achieve the research objectives, a combination of qualitative and quantitative research methods will be used. The project will be conducted in **3 studies over three years**. This mixed-method, multi-stage approach is necessary to systematically address the **5 research objectives**. Table 2 details the year and stages breakdown.

RISK ANALYSIS

To ensure the project's success, a robust risk mitigation plan has been developed, addressing potential challenges across all research components. The plan includes strategies for participant recruitment, data integrity, ethical compliance, and methodological rigor. Hence, (1) ensuring a diverse and representative sample is critical to the project's validity. Recruitment will be diversified through partnerships with gaming communities, forums, and social media platforms, alongside traditional methods like email invitations to academic networks. Special care will be taken to engage vulnerable populations, such as younger players, while adhering to strict ethical guidelines to safeguard their participation; (2) participant responses may be influenced by social desirability or recall bias, particularly in self-reported data. To address this, the project will include a mix of self-reported and observed behavioural data, triangulating findings across qualitative, quantitative, and experimental phases. Data will undergo rigorous validation procedures, including cross-checking responses, employing attention-check questions in surveys, and using randomized control in experiments to minimize bias; (3) working with vulnerable populations, such as minors, poses ethical considerations. Comprehensive ethical approvals will be secured, and all activities will comply with institutional and legal guidelines. Informed consent and confidentiality protocols will be strictly

enforced, ensuring participant safety and data privacy.

Table 2. Project lifecycle (duration: 36 months)

RESEARCH PROJECT LIFECYCLE	1-12 months				13-24 months				25-36 months			
#1. Preparatory phase, protocols, ethics; Ph.D. recruitment												
#2. Website and online communication channels												
#3. Design and pre-test the qualitative study												
#4. Qualitative research; analysis; summary of the findings												
#5. Prepare the quantitative cross-sectional survey												
#6. Pre-test the quantitative tools												
#7. Journal article #1. Research dissemination #1												
#8. Wave #1 of quantitative data collection (n=2,000)												
#9. Journal special issue. Conference 1. End of Year 1												
#1. Analysis of quantitative data: Wave #1												
#2. Preparation of Journal article #2												
#3. Research dissemination #2. Conferences #2												
#4. Design field experiments (quantitative methods)												
#5. Pre-test the experimental tools. End of Year 2												
#1. Wave #2 of data collection (n=2,000)												
#2. Analysis of quantitative data: Wave #2												
#3. Preparation of Journal article #3												
#4. Research dissemination #3. Conferences #3												
#5. Preparation of reports. Close the project												

RESEARCH METHODOLOGY AND PROCESSES

Study #1. RO1: To understand and categorize types of loot boxes and the reasons consumers buy them

The research team’s past research on consumer behaviour on social media¹ provides an ideal qualitative framework through which to investigate in-game behaviour. The **qualitative methods** will include (i) **online focus-groups**, (ii) **online in-depth interviews**, and (iii) **netnography** – a non-intrusive set of research practices rooted in online participant observation. The qualitative approach is ideal to provide in-depth insights from consumers’ interactions with loot boxes from the bottom up, insights that cannot be accessed through inferences based on statistics. We will collect the qualitative data online, assisted by the PhD student. **Amazon vouchers** will be used as a form of **incentive** for participation in the online focus groups and interviews. **Sample structure:** Polish and Australian gamers, who a) play video games, b) partake in microtransactions, c) aged ≥ 18 years with a balanced gender ratio. Netnographic data will be recorded online, through the largest Polish and Australian gaming forums (e.g., PolscyGracze.pl, Ausgamers.com). **Sample size:** online focus-groups (n=50; 5 waves with 10 high frequency gamers who purchase loot boxes), (ii) online in-depth interviews (n=40), and (iii) netnography (until saturation of data – approximately 40-60 hours). Sample structure and size follow the structure used in previous research on gaming behaviour⁸. **Data analysis:** Assisted by the PhD student, the research team will analyse the qualitative data using **Framework analysis**, by inspecting the data in several stages i.e., familiarization, identifying a thematic framework, coding, charting and mapping, and data interpretation. Study #1 also includes the formalization of project management at the institutional level, i.e., the preparation of protocols, ethics clearances, the project website and communication tools (social media channels), and the

enrolment of a PhD student (the student should have a background in behavioural research, with focus on digital communication. Possible disciplines include Marketing, Sociology, and Communication. Outputs for the studies are detailed further.

Study #2. RO2–RO4: To identify the mechanisms of in-game microtransactions and their relationship with gambling

During this stage of the project, **quantitative research methods** will be employed, more specifically, **cross-sectional survey analysis**. We have used this technique extensively to investigate consumer behaviour^{e.g., 1,2,6} and it is the most effective approach to address RO2, RO3, and RO4. Poland and Australia's leading online data collection agency will recruit this sample. For example, IPSOS has the largest online panel in both countries, which includes the demographics and specifics needed for this project. **Sample structure:** The sampling to be used should be representative of the Polish and Australian population of gamers (aged ≥ 18 years with a balanced gender ratio), which is theoretically close to the profile of gamers in other countries³⁴. **Sample size:** To check for the estimated sample size and statistical power to run the analysis with a 95% confidence interval, we have executed a Monte Carlo simulation with all possible independent and dependent variables to be included in the conceptual models. The simulation indicated that the models should yield robust and stable results with nationally representative sample of 2,000 gamers (50% split per country). **Survey instrumentalization:** The research team will develop and adapt the cross-sectional survey following standardized procedures, which we have already used extensively in research. The survey will be pre-tested and calibrated using my own network of respondents. **Data analysis:** The most advanced modelling techniques will be implemented with structural equation modelling (SEM). All the analysis will be computed in R system for statistical computing. The **PhD student** will assist with data management. Moreover, the student will receive training in SEM and will closely participate in the process of data analysis. After this stage, they will be able to implement the same techniques in their parallel research on microtransactions, further addressing gaps in the literature.

Study #3. RO5: To establish factors of in-game microtransactions leading to excessive gambling

The third and final study of the project starts during the second half of Year 2. **Experimental research design** will be implemented to achieve RO5, and to test conditions between loot box buying behaviour and excessive gambling. Experimental research is ideal to pinpoint mechanics of loot boxes that may be harmful to consumers. This technique is imperative to theory building, and most importantly, for supporting legislative change.

The research team have experience in experimental fieldwork procedures, which include the design and preparation of the **experimental online survey** and its testing. **Sample structure and size:** the sampling to be used should be representative of the Australian population of gamers (aged ≥ 18 years with a balanced gender ratio). IPSOS will be used to collect the additional online data ($n=2,000$; with a 50% split per country). Participants in Stage 2 will not be included in this study. **Data analysis:** Advanced modelling techniques will be implemented with SEM using R system for statistical computing. Similar to the previous studies, the **PhD student** will assist with the data management.

Tools and Equipment. The project will utilize state-of-the-art software for data collection and analysis. The research team has access to the artifacts needed to successfully complete this project. No additional tools or equipment will be needed nor purchased for this project.

RESEARCH TEAM

The research team brings together a highly skilled group of scholars with complementary expertise in marketing, psychology, and consumer behaviour research, ensuring a robust and

interdisciplinary approach to the project. This team has a proven track record of successful collaboration, including the IDUB CUPRUM project and other high-impact initiatives, demonstrating their ability to deliver complex research objectives.

Principal Investigator: dr hab. inż. Magdalena Brzozowska-Woś. Associate Professor Brzozowska-Woś is an accomplished marketing scholar with extensive expertise in both qualitative and quantitative research methodologies. Her work focuses on consumer behaviour and digital marketing, with a particular interest in interdisciplinary approaches. She has published widely and has co-led several research projects, including IDUB CUPRUM, where she collaborated with Schivinski. As PI, Professor Brzozowska-Woś will oversee the project's implementation, ensuring integration across research phases and adherence to objectives.

Senior Researcher: dr Bruno Schivinski. Schivinski, an Associate Professor at RMIT University and visiting professor at the Gdansk University of Technology, is a globally recognized expert in digital media, consumer behaviour, and problematic gaming practices. He has led high-profile initiatives in the video game industry. His expertise in mixed methods and statistical modelling will guide the design, analysis, and dissemination of findings. Schivinski's international collaborations and experience with academic-industry partnerships ensure the project's relevance and impact.

Executor: dr hab. Edyta Gołąb-Andrzejak. Associate Professor Gołąb-Andrzejak specializes in qualitative methodologies, including netnography and thematic analysis. Her expertise in exploring consumer motivations and perceptions will be critical during the qualitative phase of the project. She will lead data collection and analysis in this phase, ensuring high-quality insights to inform subsequent quantitative and experimental work.

Additional team members. Scholarship Recipient (PhD Candidate): A full-time PhD student with a background in behavioural research will be recruited to assist with data collection, management, and analysis across all phases of the project. They will receive training in advanced methodologies, ensuring their active contribution to project outcomes.

National and International Collaborations

To successfully complete this project and enhance its visibility and impact, the research team will seek collaborators from a team of world-class scholars whose knowledge complements our own. These relationships will allow the research team to extend scholarly and industry networks in Poland and abroad. From our current network, the project will be supported by high-profile leaders in behavioural consumption and gambling research, Distinguished Professor M. Griffiths from Nottingham Trent University in the UK and Professor C. Montag from Ulm University in Germany. We will usually communicate online (e.g., Skype), with face-to-face visits planned during Years 2 and 3. International obligations will occur concurrently where possible, to minimize expenses. **Distinguished Professor Mark Griffiths** will advise on the gambling elements of the project, including contacts with industry and policymakers in the UK and abroad. He is a frequent consultant to the British, European, and North American governments in relation to regulations for gambling, addictive and harmful online practices. Schivinski will visit him in England during Studies 2 and 3 to discuss analysis, results, and implement research dissemination with strategic stakeholders (e.g., legislators in the UK). **Professor Cristian Montag** is an advisor to regulatory boards (e.g., data privacy on Facebook, implementation of definitions for the World Health Organization). He will help to bridge research knowledge and industry practice, and to implement a system to educate consumers on behavioural problems related to loot box purchases. Schivinski will visit him in Germany during Study 2 and 3 to discuss analysis, results, and implement research dissemination with key industry stakeholders (e.g., ESL Gaming Network and game developers in EU). Finally, for media impact the project will be guided by **Professor Tania Lewis**, a world-leader in communication and behaviour

with a wide range of empirical research experience and expertise. She is Co-Director of the Digital Ethnography Research Centre, which will be engaged during the qualitative study of this project. She is a chief investigator on several research projects; and has extensive expertise in integrating scientific knowledge into the community and industry. Other possible collaborators will involve **Associate Professor Vasileios Stavropoulos**, a world expert in video game behaviour who has connections with the health sector (treatment of compulsive gaming-related behaviour). He will advise throughout the implementation of problematic gaming in Stages 2 and 3 of this project. The research team will consult with him twice a year during Years 2 and 3.

BENEFIT

Contribution to the literature and scientific community. This project addresses calls for **empirical basic research** to improve the theorization of loot boxes – an emerging research topic with interdisciplinary approaches^{35,21,16}. The achievement of the research objectives will make **five major contributions**: (i) provide an evidence base for the hitherto theoretical relationship between loot boxes and problem gambling; (ii) categorize the type of randomized systems of rewards; (iii) uncover how specific in-game communication influences gambling-related intentions and behaviour; (iv) determine mediators and moderators that influence consumers to engage in problem gambling and purchase behaviour; and (v) test for in-game dependencies driving loot box buying and problem gambling. The knowledge generated by this project will serve as the **foundation for further empirical investigation and cultural replications/adaptations** on the topic of microtransactions and loot boxes by fellow **researchers and PhD students**.

National and international benefits. This research addresses pending issues raised by the **European Parliament**³⁸ and **Environment and Communications References Committee of the Australian Senate** enquiry into the extent to which video game microtransactions for chance-based items (loot boxes) may be harmful¹⁸. This research generates insights on the influence of loot boxes on consumers, thus positioning Poland as a leader in the loot box research agenda – a key area of online gaming and gambling investigation. Additionally, the knowledge generated through this project will create the opportunity for Poland to lead the implementation of evidence-based regulation of video game microtransactions – an emerging public issue that has received global media coverage and has been called for by regulators in Europe and abroad. This issue is global, and the project is designed to be internationally relevant as the findings can inform regulations in other countries. **International legislators and policymakers** will see the Polish situation as a benchmark when implementing measures to ensure consumer protection in regard to loot boxes. Similarly, research extending (or replicating) the findings of this project may be used to adapt regulations according to country-specific needs. Furthermore, findings can be used to inform voluntary/self-regulatory practice change in the video game industry³⁶.

Benefit to society. In the literature, the harmful influence of loot boxes on consumers is only speculated. However, should the results answer the issues outlined in the research objectives related to *why, what, whether, how, in which circumstances*, and possible *dependencies* caused by loot box consumption, **consumers will be aware and educated** (see communication of results). Educating consumers proved to be feasible during the *SMART GAMING Initiative*. **Polish organisations** and other key **international organizations** in Europe, North and South America, and Asia, which assist problem gamblers and problematic gamers, can use the findings of this study to support their practices and treatment services.

Benefit to industry. Key industry stakeholders (e.g., **game developers**) will receive tailored insights regarding the influence and potential for harm of loot boxes on consumer behaviour. The project (i) will **help game developers to design new products or modify existing products** to reduce potential harm to consumers; (ii) will provide guidance for the implementation of **corporate**

social responsibility measures; (iii) will support developers to implement **ethical game design** practices³⁶; (iv) and will help developers to avoid possible reputation loss if they take action before the harms related to in-game microtransactions become well known. These measures will be planned to avoid the risk that companies will exploit the findings to maximise income from loot boxes in an unethical way.

FEASIBILITY

Taking into consideration the nature interdisciplinary, mixed-methods, multi-staged nature of this project, its benefits exceed the financial costs. The project has been carefully **planned** with industry and scholar experts in gambling (as per IDUB CUPRUM funded project), video game behaviour, and communications, as well as industry representatives (e.g., ESL Gaming). The proposal aligns with both the current needs of the research literature and society more broadly (in terms of consumer protection and regulations). The research team have substantial knowledge and **fluency in all research techniques** and analysis required to achieve the articulated research objectives. In terms of **impact and networking**, both Distinguished Professor M. Griffiths and Professor C. Montag are (i) influential in the field with **connections in the gambling and video game industry**; (ii) have **global visibility** through thousands of followers in their research networks and social media presence; and (iii) have **access to key policymakers and industry internationally**.

In terms of **risk management**, the appropriate resourcing of the scholars involved in this project and the PhD student will ensure the efficient and timely delivery of this multi-staged project. This has been proven by past collaboration with my mentors and a record of interdisciplinary research on online consumer behaviour. The research team members have individually led projects with significant empirical fieldwork, and they are highly experienced at integrating multiple methods and research methods to produce applied and scholarly outcomes.

The **strategic plans of the host university** leverage its research strengths to achieve impact and connections with industry, government and community. A complementary strength that Schivinski brings to the project falls with **RMIT University's eight Enabling Capability Platforms** (ECPs). ECPs support researchers across different disciplines to collaborate for maximum research excellence and innovation capability to create value and deliver economic, social, and environmental impact. The ECPs guide the university's investment in people, equipment, and facilities, which include PhD scholarships, Vice-Chancellor's Research Fellowships, and strategic staff appointments. In recent years, RMIT has dedicated significant resources to the Social Change ECP strategy. In terms of **environment and structure**, the host university provides a strong research environment with world-class expertise to support this project, specifically through engagement in specific **Research Centres and Groups** such as (i) the Digital Ethnography Research Centre; (ii) the Market Behaviour and Strategy Group; (iii) the Social and Global Studies Centre; and (iv) the Centre for Game Design Research.

A full-time **PhD Stipend** is part of this project. A parallel stream of research in microtransactions will complement the project and substantially contribute to the literature (e.g., exploring further mediators, moderators, cross-cultural developments, to name a few). The PhD student will receive training and actively participate in all the stages of the project. There is a large pool of potential candidates with the ability to participate in the project.

COMMUNICATION OF RESULTS

The communication strategy is tailored to target the scholarly literature, the video games industry, national and international policymakers, consumer advocates, and gamers through existing and extended networks.

Academic output. A minimum of **three journal articles** will be prepared and submitted for publication in high impact peer-reviewed interdisciplinary journals, for example, the *Journal of the Academy Marketing Science* (Q1), *Psychology & Marketing* (Q1), and *Computers in Human Behavior* (Q1); dissemination of the preliminary and complete findings will be presented at **two national conferences** – ANZMAC Australian and New Zealand Marketing Academy Conference and **three international conferences**, targeting prestigious and high-profile forums in marketing, for example, the *Academy of Marketing Science Conference*, *European Academy of Marketing Conference*, or the *American Marketing Academy Conference*. The choice of peer-reviewed outlets and conferences is based on the underlying subject of this project, consumer behaviour. The discipline of marketing encompasses advertising and communication, group and individual consumer psychology, gambling and consumption. Further academic impact is planned through a **journal special issue** devoted to microtransactions and loot boxes. A special issue proposal on the topic will be prepared and submitted for consideration in a high impact peer-reviewed interdisciplinary outlet such as *Psychology & Marketing* (Q1), *Journal of Consumer Research* (Q1). An initial conversation with the editors-in-chief of these journals indicates an interest in the topic.

Industry, policy, and community outputs. In Years 2 and 3, Schivinski and Brzozowska-Woś or Gołąb-Andrzejak will attend **two video game international conferences** attended by end users such as game developers, policymakers, and industry (e.g., Game Developer Conference – GDC and BLIZZCON); and the Melbourne International Games Week **national video game conference** during Year 3. This would further assist in building a network in these groups, thereby opening up more opportunities to influence their attitudes to and activities in video game development. **Three reports** will be produced with summaries of the research findings and sent to the Polish, European, and Australian and key international policymakers suggesting regulatory reviews. The reports will also be made available on the public policy website **Analysis and Policy Observatory** (APO). To maximise impact, other types of outputs that are short, sharp, and accessible to government - **policy briefs (2)** and **discussion papers (2)** will be prepared and sent to national and international policymakers.

Press releases and media distribution. To inform and educate the community more broadly, national and international news outlets will be communicated with after each study is concluded and/or a research paper is accepted for publication. News outlets should include national Polish news and radio, ABC News/Radio, BBC News and Forbes (USA), Schivinski has worked directly with them during the launch of the *SMART GAMING Initiative*. Additionally, to raise public awareness, articles will be prepared and submitted to the *Conversation* and other similar outlets. The material will be translated into Chinese, Portuguese, French, and Spanish to facilitate global readership.

Other communication channels. The research team will manage and administer the **project website**, which will be designed and hosted using the free tool WordPress.com. The website will make all outputs widely available for the lifetime of the project. Stakeholders will be informed about the website through a note on all the relevant publications and press releases. To support the online presence of the website, the project will have relevant **social media** channels (e.g., Twitter, to be administrated by the PhD student). Other online media includes the host university and partner universities **institutional communication channels** (i.e., RMIT University, NTU, and Ulm University).

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STRESZCZENIE POPULARNONAUKOWE

[w języku polskim i angielskim]

Badanie loot boxów w grach wideo: zrozumienie, wpływ i regulacje

Rozwój branży gier wideo przyniósł innowacyjną rozrywkę milionom ludzi, ale także wprowadził kontrowersyjne praktyki monetizacyjne, takie jak loot boxy – wirtualne pojemniki oferujące losowe nagrody. Systemy te często porównuje się do hazardu z powodu wykorzystania elementów losowości, niepewności oraz potencjalnego ryzyka finansowego. Projekt bada mechanizmy działania loot boxów, ich wpływ na zachowanie graczy oraz powiązania z kompulsywnymi wydatkami i skłonnościami hazardowymi, mając na celu wsparcie regulacji i promowanie etycznych praktyk w branży gier.

Cele projektu: Projekt ma na celu zapewnienie wszechstronnego zrozumienia loot boxów, koncentrując się na tym, jak ich projekt i strategie marketingowe wpływają na zachowania konsumentów. Poprzez poruszenie tych zagadnień projekt dostarcza rekomendacji opartych na dowodach dla decydentów politycznych i branży gier, aby chronić konsumentów, zwłaszcza dzieci i osoby z problemami hazardowymi, przed potencjalnymi szkodami. Konkretnie cele badawcze obejmują:

1. Klasyfikację typów loot boxów i ich unikalnych cech.
2. Zbadanie motywacji zakupów loot boxów, w tym czynników emocjonalnych, społecznych i ekonomicznych.
3. Określenie, w jaki sposób zmienne demograficzne (np. wiek, płeć), cechy psychologiczne i strategie marketingowe wpływają na konsumpcję loot boxów oraz zachowania podobne do hazardu.
4. Analizę roli reklam w grze i komunikacji w kształtowaniu zachowań graczy.
5. Identyfikację specyficznych cech loot boxów (np. losowe nagrody, użycie wirtualnej waluty), które najczęściej prowadzą do kompulsywnego zachowania i skłonności hazardowych.
6. Opracowanie rekomendacji opartych na dowodach, które mogą być wykorzystane do tworzenia ram regulacyjnych i etycznych praktyk branżowych.

Opis badania: Poprzez promowanie przejrzystości i ochrony konsumentów projekt przyczynia się do stworzenia bezpieczniejszego i bardziej etycznego środowiska gier, zachowując jednocześnie kreatywność i żywotność branży. Projekt składa się z trójfazowego podejścia interdyscyplinarnego:

- **Faza 1:** Metody jakościowe, w tym wywiady i netnografia, pozwolą zbadać motywacje i doświadczenia graczy korzystających z loot boxów, klasyfikując ich różne typy i analizując percepcję konsumentów.
- **Faza 2:** Ankiety ilościowe i modelowanie statystyczne zostaną użyte do analizy wpływu czynników demograficznych, indywidualnych różnic i reklam w grze na zachowania zakupowe i skłonności hazardowe.
- **Faza 3:** Badania eksperymentalne zidentyfikują specyficzne cechy loot boxów, takie jak losowe nagrody czy wirtualna waluta, które napędzają szkodliwe zachowania, dostarczając praktycznych wskazówek dla regulacji i projektowania gier.

Powody przeprowadzenia badania: Loot boxy wywołały globalną debatę, jednak reakcje regulacyjne pozostają niespójne z powodu braku dowodów empirycznych. Badanie wypełnia tę lukę, dostarczając wglądu w psychologiczne i behawioralne skutki loot boxów oraz oferując podstawy do skutecznej polityki i inicjatyw ochrony konsumentów.

Oczekiwane rezultaty: Projekt ma na celu:

1. Rozwój wiedzy akademickiej na temat mechanizmów loot boxów i ich efektów.
2. Dostarczenie praktycznych rekomendacji dla decydentów politycznych w celu regulacji szkodliwych praktyk.
3. Wsparcie branży gier w przyjęciu etycznych i przyjaznych konsumentowi standardów projektowania.
4. Edukację graczy i rodziców na temat ryzyka związanego z loot boxami i funkcjami przypominającymi hazard.

Investigating loot boxes in video games: Understanding, impact, and regulation

The growth of the video game industry has brought innovative entertainment to millions, but also introduced controversial monetization practices such as loot boxes—virtual containers offering randomized rewards. These systems are often compared to gambling due to their use of chance, uncertainty, and potential financial risk. This project explores the mechanisms behind loot boxes, their influence on player behavior, and their links to compulsive spending and gambling tendencies, aiming to inform regulation and promote ethical practices within the gaming industry.

Project goals: The project seeks to provide a comprehensive understanding of loot boxes, focusing on how their design and marketing strategies impact consumer behavior. By addressing these concerns, it aims to deliver evidence-based recommendations for policymakers and the gaming industry to protect consumers, particularly children and problem gamblers, from potential harm. The specific research goals are as follow:

1. Categorize the types of loot boxes and their unique characteristics.
2. Explore the motivations behind loot box purchases, including emotional, social, and economic factors.
3. Determine how demographic variables (e.g., age, gender), psychological traits, and marketing strategies influence loot box consumption and gambling behaviors.
4. Examine the role of in-game advertising and communication in shaping player behavior.
5. Identify specific features of loot boxes (e.g., randomized rewards, virtual currency use) that are most likely to lead to compulsive behavior and gambling tendencies.
6. Develop evidence-based recommendations to inform regulatory frameworks and ethical industry practices.

Description of research: By promoting transparency and consumer protection, this project contributes to creating a safer and more ethical gaming environment while preserving the creativity and vitality of the industry. The project employs a three-phase interdisciplinary approach. Hence:

- **Phase 1:** Qualitative methods, including interviews and netnography, will explore the motivations and experiences of players who engage with loot boxes, categorizing different types and understanding consumer perceptions.
- **Phase 2:** Quantitative surveys and statistical modeling will examine how demographic factors, individual differences, and in-game advertising influence purchasing behaviors and gambling-like tendencies.
- **Phase 3:** Experimental studies will identify specific loot box features, such as randomized rewards and virtual currency, that drive harmful behaviors, providing actionable insights for regulation and ethical game design.

Reasons for attempting this research: Loot boxes have sparked global debate, yet regulatory responses remain inconsistent due to a lack of empirical evidence. This research addresses this gap, providing insights into the psychological and behavioral impacts of loot boxes and offering a foundation for effective policy and consumer protection initiatives.

Substantial results expected: The project will:

1. Advance academic knowledge of loot box mechanisms and their effects.
2. Provide actionable recommendations for policymakers to regulate harmful practices.
3. Guide the gaming industry in adopting ethical and consumer-friendly design standards.
4. Educate players and parents about the risks associated with loot boxes and gambling-like features.

KWESTIE ETYCZNE

1. Badania na ludzkich zarodkach oraz materiale pozyskanym z ludzkich zarodków i płodów	
Czy w planowanych badaniach będą wykorzystywane ludzkie zarodki?	NIE
Czy w planowanych badaniach wykorzystane będą tkanki lub komórki pochodzące z ludzkich zarodków lub płodów?	NIE
Czy w planowanych badaniach będą wykorzystywane ludzkie embrionalne komórki macierzyste (hESCs)?	NIE
2. Badania z udziałem ludzi	
Czy planowane badania odbywają się z udziałem ludzi?	TAK
Czy planowane badania polegają na aktywnej interwencji fizycznej lub psychologicznej dotyczącej uczestników badania?	NIE
Czy w planowanych badaniach wykorzystywany będzie ludzki materiał genetyczny?	NIE
Czy planowane badania są eksperymentem medycznym zgodnie z ustawą z dnia 5 grudnia 1996 r. o zawodzie lekarza i lekarza dentysty (Dz. U. z 2018 r. poz. 617 ze zm.)?	NIE
Czy planowane badania stanowią niekomercyjne badanie kliniczne, które wymaga rejestracji w Centralnej Ewidencji Badań Klinicznych (https://www.clinicaltrialsregister.eu/) zgodnie z ustawą z dnia 6 września 2001 r. Prawo Farmaceutyczne (Dz. U. z 2017 r. poz. 2211 ze zm.) oraz ustawą z dnia 20 maja 2010 r. o wyrobach medycznych (Dz. U. z 2017 r. poz. 211 ze zm.)?	NIE
3. Ludzkie komórki/tkanki	
Czy w planowanych badaniach wykorzystywane będą ludzkie komórki lub tkanki dostępne komercyjnie, inne niż wskazane w punkcie 1?	NIE
Czy w planowanych badaniach wykorzystywane będą ludzkie próbki biologiczne pozyskane w projekcie lub pochodzące ze źródeł niekomercyjnych?	NIE
4. Dane osobowe	
Czy planowane badania wiążą się z przetwarzaniem danych osobowych?	NIE
Czy w planowanych badaniach wykorzystywane będą dane osobowe pochodzące z innych źródeł, spoza podmiotu realizującego badania?	TAK
5. Zwierzęta	
Czy w planowanych badaniach wykorzystywane będą zwierzęta kręgowce lub głowonogi?	NIE
Czy w planowanych badaniach wykorzystywany będzie materiał biologiczny pochodzący od zwierząt (np. krew, mocz lub inne)?	NIE
Czy w planowanych badaniach wykorzystywane będą zwierzęce tkanki, komórki lub linie komórkowe dostępne komercyjnie?	NIE
6. Współpraca naukowa z krajami spoza Unii Europejskiej	
Czy działania związane z badaniami podejmowanymi w krajach spoza UE stanowić mogą ryzyko pojawienia się wątpliwości natury etycznej?	NIE
Czy w badaniach planowane jest użycie lokalnych zasobów ludzkich, kulturowych lub naturalnych, np. udziału ludzi, zwierząt, roślin, materiału genetycznego ludzi lub zwierząt, szczątków ludzkich, materiału o wartości historycznej, roślin lub zwierząt chronionych itp.?	NIE
Czy w ramach badań planowany jest import lub eksport materiału badawczego z krajów spoza UE?	NIE

Jeśli zaplanowane badania obejmują kraje o niskim lub średnim dochodzie, czy przewiduje się podział korzyści wynikających z realizacji projektu?	NIE
Czy sytuacja w tym kraju mogłaby narazić osoby biorące udział w badaniach na ryzyko?	NIE
7. Środowisko, zdrowie i bezpieczeństwo (w tym badania na materiale genetycznie zmodyfikowanym)	
Czy planowane badania obejmują wykorzystanie mikroorganizmów, organizmów, tkanek lub komórek genetycznie modyfikowanych (GMO, GMM)?	NIE
Czy planowane badania dotyczą gatunków zwierząt lub roślin chronionych lub obszarów chronionych?	NIE
Czy planowane badania wymagają użycia czynników lub warunków, które mogą być szkodliwe dla ludzi, w tym personelu badawczego?	NIE
8. Dziedzictwo kulturowe	
Czy w badaniach planowane jest użycie zasobów dziedzictwa kulturowego, w tym ludzi, flory i fauny, ich materialnych pozostałości, materialnych i niematerialnych wytworów kultury oraz obszarów chronionych ze względu na ich wartość kulturową?	NIE
9. Nadużycia i podwójne zastosowanie	
Czy w badaniach planowane jest wykorzystanie lub wytworzenie produktu podwójnego zastosowania (np. patogeny, oprogramowanie, technologie), które wymagają autoryzacji eksportowej zgodnie z Rozporządzeniem UE 428/2009?	NIE
Czy planowane badania mogą potencjalnie być źródłem nadużyć, przestępstw, ataków terrorystycznych?	NIE

Opis działań podjętych w celu zapewnienia wykonywania badań zgodnie z zasadami dobrej praktyki w danej dziedzinie/dyscyplinie naukowej oraz informacja, czy jakieś zgody zostały już wydane, bądź informacje, jak te warunki zostaną spełnione [w języku angielskim]

Research that may raise concerns about whether it will be conducted by ethical principles (including research on human behaviour) is assessed by the Research Ethics Committee of the Gdańsk University of Technology.

Oświadczenie

Oświadczam, że

- w przypadku planowania badań wymagających pozyskania zgód, opinii, zezwoleń lub pozwoleń właściwych organów/komisji zobowiązuję się do ich uzyskania przed rozpoczęciem realizacji badań, których dotyczą;
- jestem świadoma/y wymogu przekazania do NCN w raportach rocznych i końcowym wszystkich uzyskanych zgód, opinii, zezwoleń lub pozwoleń niezbędnych do realizacji projektu;
- jestem również świadoma/y, że prowadzenie badań bez wymaganych zgód, opinii, zezwoleń lub pozwoleń stanowić może podstawę do nierozliczenia projektu z koniecznością zwrotu części lub całości środków.

TAK

PLAN BADAŃ [w języku polskim i angielskim]

Lp.	Nazwa zadania	Podmioty
1	Zaprojektowanie i wstępne przetestowanie badania jakościowego	<ul style="list-style-type: none">Politechnika Gdańska
	Design and pre-test the qualitative study	
2	Badania jakościowe; analiza; podsumowanie wyników	<ul style="list-style-type: none">Politechnika Gdańska
	Qualitative research; analysis; summary of the findings	
3	Przygotowanie ilościowego badania przekrojowego	<ul style="list-style-type: none">Politechnika Gdańska
	Prepare the quantitative cross-sectional survey	
4	Wstępne przetestowanie narzędzi ilościowych	<ul style="list-style-type: none">Politechnika Gdańska
	Pre-test the quantitative tools	
5	Fala #1 zbierania danych ilościowych (n=2,000)	<ul style="list-style-type: none">Politechnika Gdańska
	Wave #1 of quantitative data collection (n=2,000)	
6	Analiza danych ilościowych: Fala #1	<ul style="list-style-type: none">Politechnika Gdańska
	Analysis of quantitative data: Wave #1	

7	Projektowanie eksperymentów terenowych (metody ilościowe)	<ul style="list-style-type: none"> Politechnika Gdańska
	Design field experiments (quantitative methods)	
8	Wstępne testowanie narzędzi eksperymentalnych	<ul style="list-style-type: none"> Politechnika Gdańska
	Pre-test the experimental tools	
9	Fala #2 zbierania danych (n=2,000)	<ul style="list-style-type: none"> Politechnika Gdańska
	Wave #2 of data collection (n=2,000)	
10	Analiza danych ilościowych: Fala #2	<ul style="list-style-type: none"> Politechnika Gdańska
	Analysis of quantitative data: Wave #2	

ZBLIŻONE ZADANIA BADAWCZE

Czy kierownik (PI) ubiega się o finansowanie wskazanych we wniosku zadań badawczych również z innych źródeł?	NIE
Czy kierownik (PI) realizuje/realizował zadania badawcze zbliżone do zadań objętych tym wnioskiem?	TAK
Kierownik (PI) jest	WSPÓŁAUTOREM OPISÓW PROJEKTU

<p>Opis zbliżonych zadań i uzasadnienie konieczności ich finansowania [w języku angielskim]</p> <p>Należy wskazać realizowane i zrealizowane zadania badawcze, co do których mogłoby zajść podejrzenie podwójnego finansowania w przypadku uzyskania finansowania na zadania badawcze objęte niniejszym wnioskiem. Wyjaśnienie powinno w sposób jednoznaczny wskazywać różnice pomiędzy zadaniami badawczymi i zawierać uzasadnienie konieczności finansowania zadań badawczych w niniejszym wniosku.</p> <p>IDUB CUPRUM project explored digital consumer behaviour's psychological and behavioural dimensions, particularly in gaming environments. An extensive literature review examined the theoretical and empirical intersections of loot boxes, gambling behaviours, and digital engagement and identified vital research gaps, particularly in understanding how specific design features of loot boxes interact with player characteristics and behaviour.</p> <p>The project tested the effectiveness of various methodologies. For instance, netnography and thematic analysis were employed to explore player motivations, providing valuable qualitative insights into the psychological triggers of loot box engagement. The pilot surveys demonstrated the applicability of advanced statistical techniques for examining behavioural predictors. The findings confirmed the viability of a mixed-methods approach (combining qualitative exploration, quantitative analysis, and experimental validation).</p> <p>Building on CUPRUM's achievements, this project aims to expand the research to a broader and more complex scope. By leveraging the knowledge, tools, and preliminary results developed during CUPRUM, this proposal is well-positioned to address critical gaps in the literature and provide actionable insights for academia, policymakers, and industry stakeholders. The continuity and proven methodologies ensure that the current research will deliver significant academic, practical, and societal contributions.</p>
Autorzy opisów projektu
Ph.D. Bruno Schivinski, Gdańsk University of Technology Ph.D., D. Sc., Eng. Magdalena Brzozowska-Woś, Gdańsk University of Technology Ph.D., D. Sc. Edyta Gołąb-Andrzejak, Gdańsk University of Technology

Podmioty

Politechnika Gdańska	
Czy podmiot ubiega się o finansowanie wskazanych we wniosku zadań badawczych również z innych źródeł?	NIE

WSPÓŁPRACA MIĘDZYNARODOWA

Czy projekt realizowany we współpracy międzynarodowej?		TAK
Rodzaj współpracy	<ul style="list-style-type: none"> Współpraca międzynarodowa z partnerami z zagranicznych instytucji naukowych, którzy nie ubiegają się o środki finansowe na ten cel w ramach ogłaszanych przez instytucje partnerskie programów, organizowanych we współpracy z NCN w oparciu o procedurę agencji wiodącej 	
Kraje	<ul style="list-style-type: none"> Australia Niemcy Wielka Brytania 	

Podmioty - Australia

Lp.	Podmiot
1	RMIT University

Podmioty - Niemcy

Lp.	Podmiot
1	Ulm University

Podmioty - Wielka Brytania

Lp.	Podmiot
1	Nottingham Trent University

Opis korzyści wynikających ze współpracy międzynarodowej [w języku angielskim]
<p>To complete this project and enhance its visibility and impact, the research team will seek collaborators from world-class scholars whose knowledge complements our own. These relationships will allow the research team to extend scholarly and industry networks in Poland and abroad. From our current network, the project will be supported by high-profile leaders in behavioural consumption and gambling research, Distinguished Professor M. Griffiths from Nottingham Trent University in the UK and Professor C. Montag from Ulm University in Germany. We usually communicate online (e.g., Skype), with face-to-face visits planned during Years 2 and 3. International obligations will occur concurrently, where possible, to minimise expenses. Distinguished Professor Mark Griffiths will advise on the gambling elements of the project, including contacts with industry and policymakers in the UK and abroad. He is a frequent consultant to the British, European, and North American governments in relation to regulations for gambling and addictive and harmful online practices. Schivinski will visit him in England during Studies 2 and 3 to discuss analysis and results and implement research dissemination with strategic stakeholders (e.g., legislators in the UK). Professor Cristian Montag is an advisor to regulatory boards (e.g., data privacy on Facebook, implementation of definitions for the World Health Organization). He will help to bridge research knowledge and industry practice and implement a system to educate consumers on behavioural problems related to loot box purchases. Schivinski will visit him in Germany during Studies 2 and 3 to discuss analysis and results and implement research dissemination with key industry stakeholders (e.g., ESL Gaming Network and game developers in the EU). Finally, for media impact, the project will be guided by Professor Tania Lewis, a world leader in communication and behaviour with a wide range of empirical research experience and expertise. She is Co-Director of the Digital Ethnography Research Centre, which will be engaged during the qualitative study of this project. She is a chief investigator on several research projects and has extensive expertise in integrating scientific knowledge into the community and industry. Other possible collaborators will involve Associate Professor Vasileios Stavropoulos, a world expert in video game behaviour who has connections with the health sector (treatment of compulsive gaming-related behaviour). He will advise throughout the implementation of problematic gaming in Stages 2 and 3 of this project. The research team will consult with him twice a year during Years 2 and 3.</p>

ZESPÓŁ BADAWCZY

1. Magdalena Brzozowska-Woś, Kierownik (PI)	
Podmiot	Politechnika Gdańska
Zakres prac [w języku angielskim]	Ph.D., D. Sc., Eng. Magdalena Brzozowska-Woś is an Associate Professor at the Technical University of Gdańsk (about 70 academic peer-reviewed outputs; 689 citations - Google Scholar). She has experience conducting research for companies' commercial needs and scientific research. She is interested in digital marketing. As a researcher, she researches marketing communication on the Internet (including social media), focusing on brand management, engaging consumers in the brand and consumer behaviour (including co-creating brand value). In addition, she is also involved in research on the impact of addiction on consumer behaviour. She is interested in research using qualitative, quantitative and mixed methods. Quantitative and mixed studies prefer to use methods of multidimensional data analysis. She was involved in joint research projects with scientists from Australia (RMIT University, University of Tasmania and Victoria University) and Great Britain (Birkbeck, University of London and Nottingham Trent University). In most research projects, she was responsible for coordinating work in Poland, developing research methodologies and instruments, recruiting research participants, collecting data, and developing research reports that considered conclusions and recommendations.

2. Wykonawca_1, Wykonawca	
Podmiot	Politechnika Gdańska
Zakres prac [w języku angielskim]	Qualitative methodologies, including netnography and thematic analysis. Exploring consumer motivations and perceptions which will be critical during the qualitative phase of the project. Data collection and analysis in this phase, ensuring high-quality insights to inform subsequent quantitative and experimental work.
Wymagane kwalifikacje [w języku angielskim]	Ph.D. D.Sc. Edyta Gołąb-Andrzejak is Associate Professor at the Gdańsk University (over 60 academic peer-reviewed outputs; 417 citations) of Technology, specialising in social sciences, management, and quality sciences. Her research explores cutting-edge topics such as artificial intelligence solutions in marketing. Furthermore, she has conducted research on measuring the effectiveness of digital communication, particularly in the realm of social media performance, where AI-assisted tools play a pivotal role, as well as research about the impact of generative artificial intelligence and ChatGPT usability in creation digital advertising campaigns. He is an expert in qualitative research. He also conducts quantitative and mixed-methods research on consumers. Her expertise extends to the role of guest editor for three special issues in esteemed journals indexed in Scopus and WoS databases as well as Scientific Committee member of numerous international conferences. She was a team member in the IDUB CUPRUM research project on 'In-game microtransactions: towards regulations in loot box practices'.

3. Stypendysta/Student/Doktorant_1, Stypendysta/Student/Doktorant	
Podmiot	Politechnika Gdańska
Zakres prac [w języku angielskim]	A full-time PhD student will be recruited to assist with data collection, management, and analysis across all phases of the project. They will receive training in advanced methodologies, ensuring their active contribution to project outcomes.
Wymagane kwalifikacje [w języku angielskim]	A full-time PhD student must have demonstrated experience in behavioural research.

4. Bruno Schivinski, Badacz (Senior Researcher)	
Podmiot	Politechnika Gdańska
Zakres prac [w języku angielskim]	Bruno Schivinski, PhD (over 100 academic peer-reviewed outputs; 5500 citations) is a statistician, behavioral researcher, and Associate Professor in Advertising at RMIT University, Australia. He holds a visiting position at the Gdansk University of Technology. Schivinski consults for online service providers, websites, and scientific institutions such as the Fight Food Waste Cooperative Research Centre (FFW CRC) in Australia, the Polish Ministry of Science and Higher Education (MNiSW) and the National Science Centre (NCN) in Poland. Schivinski specializes in problematic consumer behavior, social-media engagement, online branding, and user-generated content. His research impact has received international coverage on Forbes Magazine and Google News. His latest work can be found in such academic journals as the Journal of Business Research, Journal of Advertising Research, Industrial Marketing Management, Journal of Strategic Marketing, Journal of Marketing Communications, and Journal of Clinical Medicine.

KIEROWNIK PROJEKTU (PI)

dr hab. inż. Magdalena Brzozowska-Woś	
Podmiot	Politechnika Gdańska

Stopień doktora	
Czy kierownik (PI) posiada stopień doktora?	TAK
Rok nadania stopnia	2010

Młody naukowiec	
Dzienna data nadania stopnia	2010-02-24

Dyscypliny naukowe (zgodnie z Klasyfikacją dziedzin nauki i dyscyplin naukowych oraz dyscyplin artystycznych)		
Lp.	Kod i nazwa	Dyscypliny naukowe (zgodnie z Klasyfikacją dziedzin nauki i dyscyplin naukowych oraz dyscyplin artystycznych)
1	6.6 - nauki o zarządzaniu i jakości	Główna dyscyplina naukowa

Dane osobowe	
Imię	Magdalena
Drugie imię	Maria
Nazwisko	Brzozowska-Woś
PESEL	74051401240
Data urodzenia (rrrr-mm-dd)	1974-05-14
Płeć	Kobieta
Obywatelstwo	Polska

Informacje kontaktowe	
Telefon	601057567
Adres e-mail	magdalena.brzozowska-wos@pg.edu.pl
Elektroniczna skrzynka podawcza ESP (ePUAP)	
Adres do doręczeń elektronicznych (ADE)	

Adres zamieszkania	
Kraj	Polska
Województwo	pomorskie
Kod pocztowy	80-170

Miejscowość	Gdańsk
Ulica, numer domu, numer lokalu	Zygmunta Noskowskiego 17A, 31

Adres korespondencyjny	
Kraj	Polska
Województwo	pomorskie
Kod pocztowy	80-170
Miejscowość	Gdańsk
Ulica, numer domu, numer lokalu	Zygmunta Noskowskiego 17A, 31

Elektroniczny identyfikator naukowca	
Elektroniczny identyfikator naukowca	0000-0002-8433-0685
Rodzaj identyfikatora	ORCID

Zatrudnienie				
Lp.	Nazwa podmiotu w języku polskim	Nazwa podmiotu w języku angielskim	Stanowisko w języku polskim	Stanowisko w języku angielskim
1	Politechnika Gdańska; Wydział Zarządzania i Ekonomii; Katedra Marketingu	Gdansk University of Technology; Faculty of Management and Economics; Chair of Marketing	profesor uczelni	associate professor

BADACZ (SENIOR RESEARCHER)

dr Bruno Schivinski	
Podmiot	Politechnika Gdańska

Kwalifikowalność Badacza (Senior Researcher) do konkursu	
Czy osoba planowana na stanowisko Badacza (Senior Researcher) posiada stopień doktora?	TAK
Dzienna data nadania stopnia	2015-11-26

Dane osobowe	
Imię	Bruno
Drugie imię	
Nazwisko	Schivinski
PESEL	80052419999
Data urodzenia (rrrr-mm-dd)	1980-05-24
Płeć	Mężczyzna
Obywatelstwo	Australia

Uzasadnienie zatrudnienia [w języku angielskim]
Uzasadnienie konieczności zatrudnienia osoby na stanowisku Badacza (Senior Researcher) [w języku angielskim] Powinno obejmować: 1. uzasadnienie konieczności utworzenia stanowiska Badacza (Senior Researcher) w projekcie; 2. uzasadnienie zatrudnienia wskazanej osoby, uwzględniające jej unikalne kompetencje i specjalistyczne kwalifikacje niezbędne do realizacji zadań badawczych zaplanowanych w projekcie.

1. justification of the creation of a Senior Researcher position in the project.

The proposed research project requires advanced expertise in behavioural sciences, digital communication, and interdisciplinary methodologies to investigate the complexities of video game-related consumer behaviours, including microtransactions and gambling-like mechanisms such as loot boxes.

A Senior Researcher position is critical to ensure the success of the project, as it demands leadership in designing and executing multifaceted research studies, which include both qualitative and quantitative approaches. This role is necessary to oversee the integration of various research stages, mentor junior researchers, and contribute to high-impact academic outputs. The position also ensures effective collaboration with international experts and industry stakeholders, a key component of the project.

The Senior Researcher will be responsible for:

- Developing robust research designs and methodologies.
- Leading the execution of cross-sectional and experimental studies.
- Managing and analysing large datasets using advanced statistical techniques.
- Preparing and disseminating research findings in high-impact journals and conferences.
- Establishing and maintaining collaborations with industry partners and policymakers.
- Supervising and mentoring junior researchers, including PhD students.
- This position is essential to deliver the project's objectives effectively and ensure its alignment with the highest academic and professional standards.

2. justification of the employment of the indicated person taking into account their unique competences and expertise necessary to perform the tasks in the project.

Associate Professor Bruno Schivinski's extensive expertise and proven track record uniquely position him as the ideal candidate for the Senior Researcher role in this project. With over 15 years of interdisciplinary research experience spanning behavioural sciences, digital media, and marketing communications, Schivinski has established himself as a leading scholar in the field of consumer behaviour related to digital media and video gaming. Schivinski's unique combination of skills, experience, and leadership capabilities make him indispensable for the successful execution of the project.

Key competencies and expertise that qualify Associate Professor Schivinski for this role include:

- Published extensively in top-tier journals and has over 100 peer-reviewed articles, including work in fields directly relevant to this project, such as video game consumption, gaming disorder, and digital engagement.
- Successfully led multiple interdisciplinary research projects, including the SMART GAMING Initiative, which educated over 400,000 gamers worldwide and advanced the understanding of gaming disorder and consumer behaviour in gaming contexts.
- Adept at advanced statistical modelling, including Structural Equation Modelling (SEM), and mixed-method research, key for the complex data analyses required by this project.
- Established collaborations with global experts and policymakers ensure that the project's findings will be relevant and impactful. His previous projects have informed industry practices and regulatory frameworks in Poland and abroad.
- Senior Fellow of Advance HE and academic mentor, he has demonstrated exceptional ability to guide junior researchers, ensuring capacity building within the research team.

ANKIETY CZŁONKÓW ZESPOŁU [w języku angielskim]**KIEROWNIK (PI)****dr hab. inż. Magdalena Maria Brzozowska-Woś****PRZEBIEG KARIERY NAUKOWEJ****Information on education, academic degrees/titles and employment**

1999 – completion of a uniform 5-year master's degree at the Faculty of Management and Economics at the Gdańsk University of Technology.

1999-2000 - Gdańsk University of Technology, Postgraduate Studies in Marketing Management of a Company, one-year studies completed with a very good result

2000-2001 - Gdańsk University of Technology, Postgraduate Studies in Advertising, one-year studies completed with a very good result

2010 – awarding of the degree of Doctor of Economics in the discipline of management science by the resolution of the Council of the Faculty of Management and Economics of the Gdańsk University of Technology, based on the presented doctoral dissertation entitled "Consumer behaviour on the Polish market of online trading services".

2010-2011 - Warsaw School of Social Psychology (Sopot branch), Public Relations Postgraduate Studies

2017 - Training workshops (30h) Principles of Structural Equation Modeling (conducted at the Faculty of Management and Economics of the Gdańsk University of Technology by an employee of Birkbeck, University of London from the UK)

2019 - Training workshops (Multivariate Statistical Modeling with Latent Variables - Advanced conducted at the Faculty of Management and Economics of the Gdańsk University of Technology by an employee of Birkbeck, University of London from the UK)

2020 - Certified training preparing teachers to create and conduct classes using distance learning methods and techniques based on the functionalities of the e-learning platform (Gdańsk University of Technology)

2023 - awarded the degree of Habilitated Doctor in social sciences in the discipline of management and quality sciences by the Council of the Scientific Field of Social Sciences of the Gdańsk University of Technology.

Research stays at home and abroad

No such activities.

Lectures and presentations

Papers presented at national conferences.

Prizes and awards

2020 - Individual Award of the Rector of the Gdańsk University of Technology for special scientific achievements in 2019

2016 - Team Award of the Rector of the Gdańsk University of Technology for outstanding organizational activity in 2015

2011 - Team Award of the Rector of the Gdańsk University of Technology for exceptional organizational activity in 2010

2011 - Individual Award of the Rector of the Gdańsk University of Technology for special scientific achievements in 2010

2006 - Team Award of the Rector of the Gdańsk University of Technology for special didactic achievements in 2005.

Other significant achievements

For over 10 years, I ran the Inter-Faculty Scientific Circle of Market Communication for the Gdańsk University of Technology students. The circle cooperated with companies, training members, developing market analyses, and conducting marketing research. The circle also participated in scientific research projects.

I teach six subjects (E-marketing and trend analysis, Market actors' behaviours, Advertising, E-business, Marketing research, and Marketing Basics), including the first four, which are my subjects. Since 2013, as part of the subjects E-business, E-marketing, and Behavior of market entities, in cooperation with Benhauer, I have organized regular webinars for students on the use and possibilities of automated marketing software.

I have supervised the preparation of over 60 diploma theses at the bachelor's, engineer's, and master's levels, and I have also reviewed over 90 diploma theses.

I have reviewed articles in Polish and international journals, including the Journal of Retailing and Consumer Services, Central European Management Journal, Journal of Entrepreneurship, Management and Innovation, Journal of Theoretical and Applied Electronic Commerce Research, International Journal of Environmental Research and Public Health, Sustainability, Information, Frontiers in Psychology, Modern Management Review, and Forum Scientiae Oeconomia. Since 2020, I have been the Review Editor on the Editorial Board of Media Psychology (a speciality section of Frontiers in Psychology).

Other key information impacting the evaluation of the academic and research career

I had health problems in 2021-2023. Some of them were due to the sudden loss of both parents. During that time, I was on frequent sick leave and underwent 2 surgeries.

PUBLIKACJE NAUKOWE

1. Brzozowska-Woś M., *Wpływ cyfrowej komunikacji marketingowej na angażowanie się w markę i współtworzenie jej wartości przez młodych konsumentów [The influence of digital marketing communication on brand engagement and co-creating of its value by young consumers]* (2020), książka, Gdańsk: Wydawnictwo Politechniki Gdańskiej, stron 346, ISBN 978-83-7348-827-4
Liczba cytowań (bez autocytowań): 8
Otwarty dostęp: nie
Status publikacji: opublikowane
2. Dabrowski, D., Brzozowska-Woś, M., Gołąb-Andrzejak, E., Firgolska, A. , *Market orientation and hotel performance: The mediating effect of creative marketing programs* (2019), artykuł, Journal of Hospitality and Tourism Management, 41, p. 175-183
Liczba cytowań (bez autocytowań): 100
Otwarty dostęp: nie, DOI 10.1016/j.jhtm.2019.10.006
Status publikacji: opublikowane, *Publikacja do pobrania z systemu*
3. Brzozowska-Woś M., Schivinski B. , *The Effect of Online Reviews on Consumer-Based Brand Equity: Case-Study of the Polish Restaurant Sector* (2019), artykuł, Central European Management Journal, 3(27), s. 2-27
Liczba cytowań (bez autocytowań): 16
Otwarty dostęp: tak, DOI 10.7206/cemj.2658-0845.1
Status publikacji: opublikowane
4. Brzozowska-Woś M., Schivinski B. , *The influence of interpersonal motivation on polish consumers' online brand-related activity* (2019), artykuł, Argumenta Oeconomica, 2 (43), p. 213-231
Liczba cytowań (bez autocytowań): 5
Otwarty dostęp: tak, DOI 10.15611/aoe.2019.2.09
Status publikacji: opublikowane
5. Schivinski B., Brzozowska-Woś M., Stansbury, E., Satel, J., Montag, C., Pontes, H.M. , *Exploring the role of social media use motives, psychological well-being, self-esteem, and affect in problematic social media use* (2020), artykuł, Frontiers in Psychology, 11
Liczba cytowań (bez autocytowań): 111
Otwarty dostęp: tak, DOI 10.3389/fpsyg.2020.617140
Status publikacji: opublikowane
6. Bruno Schivinski, Magdalena Brzozowska-Woś, Erin M. Buchanan, Mark D. Griffiths, Halley M. Pontes, *Psychometric assessment of the Internet Gaming Disorder diagnostic criteria: An Item Response Theory study* (2018), artykuł, Addictive Behaviors Reports, 8, p. 176-184
Liczba cytowań (bez autocytowań): 105
Otwarty dostęp: tak, DOI 10.1016/j.abrep.2018.06.004
Status publikacji: opublikowane, *Publikacja do pobrania z systemu*
7. Halley M. Pontes, Bruno Schivinski, Magdalena Brzozowska-Woś, Vasileios Stavropoulos, *Laxer Clinical Criteria for Gaming Disorder May Hinder Future Efforts to Devise an Efficient Diagnostic Approach: A Tree-Based Model Study* (2019), artykuł, Journal of Clinical Medicine, 8
Liczba cytowań (bez autocytowań): 30
Otwarty dostęp: tak, DOI 10.3390/jcm8101730
Status publikacji: opublikowane
8. Gupta S., Schivinski B., Brzozowska-Woś M., *Antecedents and Consequences of Brand Loyalty* (2017), artykuł, Handel Wewnętrzny, 5(370), p. 200-212
Liczba cytowań (bez autocytowań): 25
Otwarty dostęp: tak
Status publikacji: opublikowane

9. Unal G., Schivinski B., Brzozowska-Woś M., *Literature Review on Conceptualisation of Online Consumer Engagement* (2017), artykuł, Handel Wewnętrzny, 6(371), p. 353-362

Liczba cytowań (bez autocytowań): 10

Otwarty dostęp: tak

Status publikacji: opublikowane

10. SCHIVINSKI B., MANCUSO G., BRZOZOWSKA-WOŚ M., *EXPLORING THE ROLE OF BRAND EXPERIENCE IN DRIVING CONSUMER EMOTIONS AND ENGAGEMENT WITH SPORTS BRANDS IN AUSTRALIA* (2024), artykuł, Zeszyty Naukowe.

Organizacja i Zarządzanie / Politechnika Śląska, 204, p. 553-574

Liczba cytowań (bez autocytowań): 0

Otwarty dostęp: tak, DOI 10.29119/1641-3466.2024.204.33

Status publikacji: opublikowane

DOKONANIA ARTYSTYCZNE

b.d.

BADANIA NAUKOWE FINANSOWANE PRZEZ NCN

b.d.

INNE PROJEKTY BADAWCZE

Tytuł: **In-game microtransactions: Towards regulations in loot box practices**

Nr rejestracyjny: 3/2022/IDUB/II.1.1

Źródło(a) finansowania: IDUB CUPRUM GUT

Kwota: **286 750 PLN**

Podmiot realizujący: **Politechnika Gdańska**

Data rozpoczęcia realizacji: **2022-11-15**, Data zakończenia realizacji: **2024-12-14**

Lista najważniejszych publikacji będących rezultatem projektu:

b.d.

W przypadku braku publikacji naukowych, zwięźły opis innych efektów badań:

This project investigated digital consumer behaviour, focusing on psychological and behavioural aspects in gaming environments. It validated research methodologies and emphasized the need for further exploration. A literature review identified gaps regarding how loot box design features influence player behaviour and characteristics. Netnography and thematic analysis revealed player motivations, offering insights into the psychological triggers of loot box engagement. Pilot surveys confirmed the usefulness of advanced statistical methods for studying behavioural predictors. The research demonstrated the effectiveness of a mixed-methods approach, combining qualitative exploration, quantitative analysis, and experimental validation, to understand digital engagement and gambling-like behaviours.

NAJWAŻNIEJSZE OSIĄGNIĘCIE NAUKOWE

Book: THE INFLUENCE OF DIGITAL MARKETING COMMUNICATION ON BRAND ENGAGEMENT AND CO-CREATING OF ITS VALUE BY YOUNG CONSUMERS

The book's research aims to identify factors and relationships that positively influence young consumers' (Generations Y and Z) engagement with brands, leading to repeat purchases and co-creation of brand value.

The study adopted a pragmatic paradigm and used a mixed-method research approach integrating qualitative and quantitative techniques. This improved the reliability of the results obtained from netnography, individual interviews, and online surveys. Insights from qualitative methods refined the research framework built on existing theory, then quantitatively tested with 1,109 respondents.

A key achievement was the development of a universal scale for measuring young consumers' perceptions of online marketing communications, rooted in inbound marketing and the dominant value logic. The research fills the gap by examining the relationship between perceived online marketing communications, consumer engagement, and brand value co-creation.

The results highlight the complexity of engaging young consumers, emphasizing the importance of the synergy of three mediators: consumer brand engagement, perceived brand value, and brand trust. All three are crucial in linking online marketing communications to brand value co-creation.

The study also reveals organizations' challenges in creating effective online communication strategies for Millennials and Generation Z. The proposed scale offers a practical tool for assessing and improving online marketing activities, facilitating effective engagement with younger audiences.

BADACZ (SENIOR RESEARCHER) – ANKIETA DOROBKU [w języku angielskim]
dr Bruno Schivinski**PRZEBIEG KARIERY NAUKOWEJ****Information on education, academic degrees/titles and employment****EDUCATION**

2011 – 2015 Ph.D. in Management (awarded with highest honours and distinction), focus on Marketing, Gdansk University of Technology, Poland

Thesis title: The impact of brand equity on consumer's online brand related activities

Supervisor: Professor Dariusz Dabrowski

2006 – 2011 MA in Sociology (awarded with highest honours and distinction), focus on Marketing, University Maria Curie-Skłodowska in Lublin, Poland

2008 – 2010 BSc in Management, focus on Marketing, University Maria Curie-Skłodowska in Lublin, Poland

EXPERIENCE (Academic degrees, titles, and employment)

2024 – Present Associate Professor in Communication, RMIT University, Australia

2019 – 2024 Senior Lecturer – Advertising, RMIT University, Australia

2017 – 2019 Senior Lecturer in Marketing (B), Birkbeck, University of London (BBK), UK

2015 – 2017 Senior Lecturer in Marketing, Nottingham Trent University (NTU), UK

2011 – 2015 Lecturer in Marketing, Gdansk University of Technology (GUT), Poland

Research stays at home and abroad

2024 – Present Visiting Scholar, Gdansk University of Technology (GUT), Poland

2020 – Present Visiting Scholar, The University of Queensland (UQ), Australia

2020 – Present Visiting Scholar, Victoria University, Australia

2019 – 2022 Visiting Scholar, Birkbeck, University of London (BBK), UK

2018 – Present Visiting Scholar, London South Bank University, UK

2018 – Present Visiting Professorship, University of Professional Studies, Accra (UPSA), Ghana

2018 – 2019 Visiting Lectureship, Regent's University of London, UK

2016 – 2020 External Examiner, University of Bedfordshire, UK

Prizes and awards

2022 Emerald Literati Network, Journal of Product and Brand Management, Awarded with Outstanding Reviewer for scientific quality and rigor.

2020 RMIT University. Vice-Chancellor's Award for Research Impact–Early Career Researcher–Design.

2020 Elsevier, Industrial Marketing Management, Awarded with Best Paper Award Runner-up for "Reflections of "Social media: Influencing customer satisfaction in B2B sales" and a research agenda".

2017 The Advertising Research Foundation, Journal of Advertising Research, Awarded with Best Paper Award Runner-up for "Developing and Validating a Scale to Measure Consumers' Engagement with Social Media Brand-Related Content".

2016 Emerald Literati Network, Journal of Research in Interactive Marketing, Awarded with Outstanding Paper for "The impact of brand communication on brand equity through Facebook".

2015 Gdansk University of Technology, Faculty of Management and Economics. Awarded with excellence in teaching, organizational, scientific activities.

2014 Best presentation award: CreativeTime – Wpływ młodych naukowców na osiągnięcia Polskiej nauki, V edycja, Kraków, Poland.

2012 Gdansk University of Technology Rector's Cup. Awarded for the first place at "Barn Swallow Entrepreneurship 2011" contest for the best business plan and business innovation criteria.

2011 City Hall Scholarship from the City of Lublin. Awarded for the best M.A. dissertation dedicated to the economic development of the City of Lublin.

2011 Best paper award: Second place on the IX National Scientific Conference "Method, technique and tools of management", Lublin, Poland.

2010 Best case study presentation award: XIII International Scientific Conference Quality & Ethics, Kazimierz Dolny, Poland.

2009 Best case study presentation award: XII International Scientific Conference Activity 2009 - Creativity and entrepreneurship in the pro qualitative thinking and acting, Kazimierz Dolny, Poland.

Other significant achievements

ASSOCIATED EDITOR

Sage Open – ISSN: 21582440

Central European Journal of Management – ISSN: 2450-7814

EDITORIAL BOARD

Journal of Product and Brand Management – ISSN: 1061-0421

Cites 5490 (November 2024)

h-index 26

i10-index 43

FUNDED PROJECTS AS PI: 13 generating over \$900,000 aggregated funds.

Other key information impacting the evaluation of the academic and research career

RESEARCH IMPACT AND CONTRIBUTIONS TO THE FIELD

Social change through gaming disorder interventions – Relevant to this NCN Scheme

I drive world-class research impact, demonstrated by 13 research awards over 11 years. Notably, I received the prestigious Vice-Chancellor's Award for Research Impact at RMIT University in 2020, recognising my significant contributions to the field of problematic online gaming and its theoretical and practical advancements.

My research on problematic gaming behaviours served as the scientific foundation for the SMART GAMING Initiative, co-led by the world's largest esports league, ESL Gaming (equivalent to the NBA for esports). Insights from this research have educated over 500,000 gamers across 168 countries, raising awareness and supporting individuals with uncontrolled gaming behaviours. Furthermore, my contribution led to the development of the Gaming Disorder Test (GDT), an assessment tool recommended by the World Health Organization (WHO). My interdisciplinary work on Gaming Disorder (GD) has made internationally recognised advancements in its conceptualisation, measurement, and user communication. To date, this remains the largest and most successful evidence-based campaign addressing problematic gaming worldwide. Outstanding impacts of this work include:

- 2023: My expertise has leveraged strategic networks with Australian industry partners such as CatholicCare (school counselling services), ACMI, and Mighty Serious (game developer). These partnerships lend expertise and resources that will be instrumental in supporting the goals of this grant proposal.
- 2022 – present: I was selected by peers to co-lead an incubator project on Gaming Disorder in Central Europe, hosted at the Gdansk University of Technology, Poland. This project, which focuses on developing evidence-based interventions for Gaming Disorder, has already attracted income (CUPRUM project \$109,300), further affirming my recognised leadership in this field.
- 2021: My work's influence was demonstrated through my nomination for a special editorial role in the prestigious Journal of Clinical Medicine (Q1, h-index 75). This opportunity arose as a direct result of my contributions to the field, particularly in the area of digital health interventions for Gaming Disorder.
- My research has garnered significant media coverage, leveraging RMIT's media presence. Appearances in leading outlets such as Forbes, Google News, ABC News, BBC News (UK), and numerous specialist gaming and mental health forums (source: Google) have extended my research's reach to diverse global audiences. For example, my interview with Google News alone received over 3 million views, providing broad public access to these critical health insights.

PUBLIKACJE NAUKOWE

1. B Schivinski, D Dabrowski, *The effect of social media communication on consumer perceptions of brands* (2016), artykuł, Journal of Marketing Communications, 22 (2), 189-214
Liczba cytowań (bez autocytowań): 1693
Otwarty dostęp: nie, DOI <https://doi.org/10.1080/13527266.2013.871323>
Status publikacji: opublikowane
2. B Schivinski, D Dabrowski, *The impact of brand communication on brand equity through Facebook* (2015), artykuł, Journal of Research in Interactive Marketing, Vol. 9 No. 1, pp. 31-53
Liczba cytowań (bez autocytowań): 820
Otwarty dostęp: nie, DOI <https://doi.org/10.1108/JRIM-02-2014-0007>
Status publikacji: opublikowane

3. B Schivinski, G Christodoulides, D Dabrowski, *Measuring consumers' engagement with brand-related social-media content: Development and validation of a scale that identifies levels of social-media engagement with brands* (2016), artykuł, *Journal of Advertising Research*, 56 (1), 64-80
Liczba cytowań (bez autocytowań): 724
Otwarty dostęp: nie, DOI DOI: 10.2501/JAR-2016-004
Status publikacji: opublikowane
4. H Pontes, B Schivinski, C Sindermann, M Li, B Becker, M Zhou, C Montag, *Measurement and conceptualization of Gaming Disorder according to the World Health Organization framework: The development of the Gaming Disorder Test* (2021), artykuł, *International Journal Of Mental Health And Addiction*, Volume 19, pages 508–528, (2021)
Liczba cytowań (bez autocytowań): 234
Otwarty dostęp: nie, DOI <https://doi.org/10.1007/s11469-019-00088-z>
Status publikacji: opublikowane
5. Reflections on “social media: Influencing customer satisfaction in B2B sales” and a research agenda, D Nunan, O Sibai, B Schivinski, G Christodoulides (2018), artykuł, *Industrial Marketing Management*, 75, 31-36
Liczba cytowań (bez autocytowań): 224
Otwarty dostęp: nie, DOI <https://doi.org/10.1016/j.indmarman.2018.03.009>
Status publikacji: opublikowane
6. Christian Montag, Bruno Schivinski, Rayna Sariyska, Christopher Kannen, Zsolt Demetrovics, Halley M Pontes, *Psychopathological Symptoms and Gaming Motives in Disordered Gaming—A Psychometric Comparison between the WHO and APA Diagnostic Frameworks* (2019), artykuł, *Journal of Clinical Medicine*, 8 (10), 1691
Liczba cytowań (bez autocytowań): 132
Otwarty dostęp: nie, DOI <https://doi.org/10.3390/jcm8101691>
Status publikacji: opublikowane
7. B Schivinski, M Brzozowska-Woś, EM Buchanan, MD Griffiths, HM Pontes, *Psychometric assessment of the internet gaming disorder diagnostic criteria: An item response theory study* (2018), artykuł, *Addictive Behaviors Reports*, 8, 176-184
Liczba cytowań (bez autocytowań): 122
Otwarty dostęp: nie, DOI <https://doi.org/10.1016/j.abrep.2018.06.004>
Status publikacji: opublikowane
8. B Schivinski, DG Muntinga, HM Pontes, P Lukasik, *Influencing COBRAs: the effects of brand equity on the consumer's propensity to engage with brand-related content on social media* (2021), artykuł, *Journal of Strategic Marketing*, 29 (1), 1-23
Liczba cytowań (bez autocytowań): 112
Otwarty dostęp: nie, DOI <https://doi.org/10.1080/0965254X.2019.1572641>
Status publikacji: opublikowane
9. Bruno Schivinski, Magdalena Brzozowska-Woś, Ellena Stansbury, Jason Satel, Christian Montag, Halley M Pontes, *Exploring the role of social media use motives, psychological well-being, self-esteem, and affect in problematic social media use* (2020), artykuł, *Frontiers in Psychology*, Volume 11
Liczba cytowań (bez autocytowań): 111
Otwarty dostęp: nie, DOI <https://doi.org/10.3389/fpsyg.2020.617140>
Status publikacji: opublikowane
10. B Schivinski, *Eliciting brand-related social media engagement: A conditional inference tree framework* (2021), artykuł, *Journal of Business Research*, 130, 594-602
Liczba cytowań (bez autocytowań): 105
Otwarty dostęp: nie, DOI <https://doi.org/10.1016/j.jbusres.2019.08.045>
Status publikacji: opublikowane

DOKONANIA ARTYSTYCZNE

b.d.

WYNAGRODZENIA I STYPENDIA

Wynagrodzenia i stypendia							
Lp.							
1				Rok 2025	Rok 2026	Rok 2027	Rok 2028
	Nazwa	dr hab. inż. Magdalena Maria Brzozowska-Woś		22 500	22 500	22 500	22 500
	Rodzaj udziału	Kierownik (PI)					
	Podmiot	Politechnika Gdańska					
	Rodzaj zatrudnienia	wynagrodzenie dodatkowe					
	Okres pobierania wynagrodzenia [w miesiącach]	36					
	Wynagrodzenie całkowite [PLN]			90 000			
2				Rok 2025	Rok 2026	Rok 2027	Rok 2028
	Nazwa	Wykonawca_1		15 000	15 000	15 000	15 000
	Rodzaj udziału	Wykonawca					
	Podmiot	Politechnika Gdańska					
	Rodzaj zatrudnienia	wynagrodzenie dodatkowe					
	Okres pobierania wynagrodzenia [w miesiącach]	36					
	Wynagrodzenie całkowite [PLN]			60 000			
3				Rok 2025	Rok 2026	Rok 2027	Rok 2028
	Nazwa	Stypendysta/Student/Doktorant_1		45 000	45 000	45 000	45 000
	Rodzaj udziału	Stypendysta/Student/Doktorant					
	Podmiot	Politechnika Gdańska					
	Rodzaj zatrudnienia	stypendium/wynagrodzenie studenta lub doktoranta					
	Okres pobierania wynagrodzenia [w miesiącach]	36					
	Wynagrodzenie całkowite [PLN]			180 000			

4			Rok 2025	Rok 2026	Rok 2027	Rok 2028
	Nazwa	dr Bruno Schivinski	52 500	52 500	52 500	52 500
	Rodzaj udziału	Badacz (Senior Researcher)				
	Podmiot	Politechnika Gdańska				
	Rodzaj zatrudnienia	wynagrodzenie pełnoetatowe				
	Okres pobierania wynagrodzenia [w miesiącach]	36				
	Wynagrodzenie całkowite [PLN]		210 000			

Zatrudnienie na stanowisku Badacza (Senior Researcher)	
Politechnika Gdańska - oświadczenie	
Osoba reprezentująca podmiot realizujący, w którym przewidziane jest zatrudnienie na tym stanowisku, zobowiązuje się do dofinansowania stanowiska w kwocie co najmniej 70 000 zł rocznie.	
Akceptacja oświadczenia	Tak

APARATURA

Lp.	Aparatura	Podmiot	Rok zakupu lub wytworzenia	Koszt jednostkowy [PLN]	Liczba	Dofinansowanie z podmiotu realizującego (jeśli dotyczy) [PLN]	Wnioskowane dofinansowanie z NCN [PLN]
1	Oprogramowanie Mplus (Program podstawowy i dodatek łączony)	Politechnika Gdańska	2026	4 456	2	0	8 912
	Mplus software (Base Program and Combination Add-On)						
	Opis [w języku angielskim]	Mplus is a statistical modelling program that provides researchers with a flexible tool for data analysis. Mplus offers researchers a wide range of models, estimators, and algorithms in a program with an easy-to-use interface, graphical presentations of data and analysis results. Mplus allows the analysis of cross-sectional and longitudinal data, single-level and multilevel data, data from different populations with observed or unobserved heterogeneity, and data containing missing values. It is one of the best programs of its kind used by researchers around the world. We can only purchase a perpetual license for a given version.					
	Uzasadnienie konieczności zakupu [w języku angielskim]	This is one of the basic tools for statistical analysis. It is essential when working with data. Due to the number and scope of analyses, at least two team members should have access to the software to work on it simultaneously.					
2	IBM SPSS Statistics Premium	Politechnika Gdańska	2026	19 299	2	0	38 598
	IBM SPSS Statistics Premium						
	Opis [w języku angielskim]	IBM SPSS Statistics in the Premium edition allows you to conduct analyses aimed at statistical description, explanation of phenomena, or prediction. The Premium version includes all the SPSS Statistics Standard package modules, such as IBM SPSS Statistics Base, IBM SPSS Advanced Statistics, IBM SPSS Regression, and IBM SPSS Custom Tables. Additionally, it has been extended to include IBM SPSS Data Preparation, IBM SPSS Missing Values, IBM SPSS Forecasting, IBM SPSS Categories, IBM SPSS Decision Trees, IBM SPSS Direct Marketing, IBM SPSS Complex Samples, IBM SPSS Conjoint, IBM SPSS Neural Networks, IBM SPSS Bootstrapping, IBM SPSS Exact Tests, IBM SPSS Viz Designer. The software is available by subscription. The best plan is for a year.					
	Uzasadnienie konieczności zakupu [w języku angielskim]	This is one of the basic tools for statistical analysis. It is essential when working with data. Due to the number and scope of analyses, at least two team members should have access to the software to work on it simultaneously.					
3	IBM SPSS Statistics Premium	Politechnika Gdańska	2027	19 299	2	0	38 598
	IBM SPSS Statistics Premium						
	Opis [w języku angielskim]	IBM SPSS Statistics in the Premium edition allows you to conduct analyses aimed at statistical description, explanation of phenomena, or prediction. The Premium version includes all the SPSS Statistics Standard package modules, such as IBM SPSS Statistics Base, IBM SPSS Advanced Statistics, IBM SPSS Regression, and IBM SPSS Custom Tables. Additionally, it has been extended to include IBM SPSS Data Preparation, IBM SPSS Missing Values, IBM SPSS Forecasting, IBM SPSS Categories, IBM SPSS Decision Trees, IBM SPSS Direct Marketing, IBM SPSS Complex Samples, IBM SPSS Conjoint, IBM SPSS Neural Networks, IBM SPSS Bootstrapping, IBM SPSS Exact Tests, IBM SPSS Viz Designer. The software is available by subscription. The best plan is for a year.					
	Uzasadnienie konieczności zakupu [w języku angielskim]	This is one of the basic tools for statistical analysis. It is essential when working with data. Due to the number and scope of analyses, at least two team members should have access to the software to work on it simultaneously.					

4	IBM SPSS Statistics Premium	Politechnika Gdańska	2028	19 299	2	0	38 598
	IBM SPSS Statistics Premium						
	Opis [w języku angielskim]	IBM SPSS Statistics in the Premium edition allows you to conduct analyses aimed at statistical description, explanation of phenomena, or prediction. The Premium version includes all the SPSS Statistics Standard package modules, such as IBM SPSS Statistics Base, IBM SPSS Advanced Statistics, IBM SPSS Regression, and IBM SPSS Custom Tables. Additionally, it has been extended to include IBM SPSS Data Preparation, IBM SPSS Missing Values, IBM SPSS Forecasting, IBM SPSS Categories, IBM SPSS Decision Trees, IBM SPSS Direct Marketing, IBM SPSS Complex Samples, IBM SPSS Conjoint, IBM SPSS Neural Networks, IBM SPSS Bootstrapping, IBM SPSS Exact Tests, IBM SPSS Viz Designer. The software is available by subscription. The best plan is for a year.					
	Uzasadnienie konieczności zakupu [w języku angielskim]	This is one of the basic tools for statistical analysis. It is essential when working with data. Due to the number and scope of analyses, at least two team members should have access to the software to work on it simultaneously.					
5	NVivo 15	Politechnika Gdańska	2025	5 212	1	0	5 212
	NVivo 15						
	Opis [w języku angielskim]	The most widely used programme in research worldwide for analysing qualitative data collected by qualitative or mixed methods.					
	Uzasadnienie konieczności zakupu [w języku angielskim]	The programme will be used to analyse the qualitative data in the first stage of the study.					
Razem:						129 918	

INNE KOSZTY

Inne koszty bezpośrednie						
Lp.			Rok 2025	Rok 2026	Rok 2027	Rok 2028
1.	Nazwa / opis [w języku angielskim]	Qualitative research - data collection	0	136 530	0	0
	Kategoria	Usługi obce				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		136 530			
	Uzasadnienie i kalkulacja [w języku angielskim]					
	<p>Methods:</p> <p>(i) online focus groups, (n=50; 5 waves with 10 players who frequently buy loot boxes) (current estimated total gross costs of data collection in Poland by the research agency 55 350 PLN)</p> <p>(ii) in-depth online interviews (n=40) (current estimated total gross costs of data collection in Poland by the research agency 44 280 PLN)</p> <p>(iii) netnography - until data saturation - approximately 40-60 hours (current estimated total gross costs of data collection in Poland by the research agency 36 900 PLN)</p> <p>Sample structure: Poles and Australians who a) play video games, b) participate in microtransactions, c) are aged ≥ 18 years, with a balanced gender ratio.</p> <p>Netnographic data will be recorded online, via the largest Polish and Australian gaming forums (e.g. PolscyGracze.pl, Ausgamers.com).</p>					
2.	Nazwa / opis [w języku angielskim]	Quantitative survey - 1st wave	0	36 900	0	0
	Kategoria	Usługi obce				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		36 900			
	Uzasadnienie i kalkulacja [w języku angielskim]					
	<p>Method: panel survey - conducted on a panel of a research agency</p> <p>The sample to be used should be representative of the Polish and Australian player population (aged ≥ 18 years with balanced gender ratio), 2000 players (50% in each country).</p> <p>(current estimated total gross costs of data collection in Poland by the research agency 36 900 PLN).</p>					
3.	Nazwa / opis [w języku angielskim]	Quantitative survey - 2nd wave	0	0	61 500	0
	Kategoria	Usługi obce				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		61 500			
	Uzasadnienie i kalkulacja [w języku angielskim]					
	<p>Method: experimental online survey</p> <p>Sample structure and size: sample should be representative of the Australian and Polish gaming population (aged ≥ 18 years with balanced gender ratio). Collection of additional online data (n = 2000; with 50% breakdown by country). Stage 2 participants will not be included in this study.</p> <p>(current estimated total gross costs of data collection in Poland by the research agency 61 500 PLN).</p>					

4.	Nazwa / opis [w języku angielskim]	Participation in scientific conferences of international and global recognition	0	24 736	27 786	20 502
	Kategoria	Wyjazdy służbowe				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		73 024			
	Uzasadnienie i kalkulacja [w języku angielskim]					
<p>Below we provide the list of the sample conferences with approximate costs (based on the costs of previous events):</p> <p>1. ANZMAC Australian and New Zealand Marketing Academy Conference (3 days) - (fee: 3 603 PLN, travel cost: 1 321 PLN, daily allowances: 1240 PLN, accommodation: 2820 PLN - TOTAL cost: 8 984,00 PLN)</p> <p>2. EMAC ANNUAL CONFERENCE (4 days)- (fee: 3 027 PLN, travel cost: 1 425 PLN, daily allowances: 1 076 PLN, accommodation: 2 348 PLN - (total cost for 1 person: 7 876,00 PLN) (TOTAL cost for 2 participants 15 752 PLN)</p> <p>3. AMA CONFERENCE (3 days) - (fee: 3 727 PLN, travel cost: 4 103 PLN, daily allowances: 1 196 PLN, accommodation: 4 867 PLN - total cost for 1 person: 13 893,00 PLN) - (TOTAL cost for 2 participants 27 786,00 PLN)</p> <p>4. Academy of Marketing Science (e.g. Canada) (3 days) - (fee: 3204 PLN, travel cost: 3 843 PLN, daily allowances: 1 020 PLN, accommodation: 2 184 PLN - total cost for 1 person: 10 796,00 PLN) - (TOTAL cost for 2 participants 20 502,00 PLN)</p>						
5.	Nazwa / opis [w języku angielskim]	Expert consultations as indicated in the application - UK, Germany, Australia	0	22 734	22 734	15 623
	Kategoria	Wizyty, konsultacje				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		61 091			
	Uzasadnienie i kalkulacja [w języku angielskim]					
<p>Below we provide the list of the sample approximate costs (based on the current costs of travel):</p> <p>1. Distinguished Professor Mark Griffiths UK (travel cost: 778 PLN, daily allowances: 695 PLN, accommodation: 2 265 PLN - TOTAL cost/1 visit 3 days: 3 738 PLN; TOTAL COST 2 VISITS 7 476 PLN)</p> <p>2. Professor Cristian Montag DE (travel cost: 1 293 PLN, daily allowances: 628 PLN, accommodation: 1452 PLN - TOTAL cost/1 visit 3 days: 3373 PLN; TOTAL COST 2 VISITS 6 746 PLN)</p> <p>3. Professor Tania Lewis AU (travel cost: 7 449 PLN, daily allowances: 2 480 PLN, accommodation: 5 694 PLN - TOTAL cost/1 visit 10 days: 15 623 PLN)</p> <p>4. Associate Professor Vasileios Stavropoulos AU (travel cost: 7 449 PLN, daily allowances: 2 480 PLN, accommodation: 5 694 PLN - TOTAL cost/1 visit 10 days: 15 623 PLN; TOTAL COST 2 VISITS 31 246 PLN))</p>						

6.	Nazwa / opis [w języku angielskim]	Translation services	0	8 833	8 833	8 833
	Kategoria	Usługi obce				
	Podmiot	Politechnika Gdańska				
	Kwota łącznie [PLN]		26 499			
	Uzasadnienie i kalkulacja [w języku angielskim]					
	Translation of research results published in articles into Chinese, French and Spanish. Estimated translation costs according to prices as of 7 December 2024 (https://www.tlumaczenia-miw.pl/cennik.html) Conversion page 1800 characters including spaces: Chinese 150 PLN/page; French: 55 PLN/page; Spanish: 60 PLN/page. 100 pages per language: Chinese (total translation cost: PLN 15,000; French: PLN 5,500; Spanish: PLN 6,000. Total cost of translation: PLN 26,500.					

OPEN ACCESS

Nazwa podmiotu	Koszty pośrednie OA (%)	Koszty pośrednie Open Access [PLN]				RAZEM [PLN]
		Rok 2025	Rok 2026	Rok 2027	Rok 2028	
1. Politechnika Gdańska	1.92	0	6 809	6 809	6 809	20 427

POZOSTAŁE KOSZTY POŚREDNIE

Nazwa podmiotu	Pozostałe koszty pośrednie (%)	Pozostałe koszty pośrednie [PLN]				RAZEM [PLN]
		Rok 2025	Rok 2026	Rok 2027	Rok 2028	
1. Politechnika Gdańska	20.00	28 042	82 449	58 890	43 711	213 092

POMOC PUBLICZNA

1. Politechnika Gdańska	
Czy finansowanie będzie stanowiło pomoc publiczną?	NIE
Kierownik (PI) i osoby reprezentujące podmiot zapoznały się z zasadami występowania pomocy publicznej	TAK

ZESTAWIENIE KOSZTÓW PODMIOTÓW

Politechnika Gdańska					
Koszty pośrednie OA (%)	1,92				
Pozostałe koszty pośrednie (%)	20,00				
	Rok 2025	Rok 2026	Rok 2027	Rok 2028	Razem [PLN]
Koszty bezpośrednie, w tym:	140 212	412 243	294 451	218 556	1 065 462
- koszty wynagrodzeń i stypendiów, w tym:	135 000	135 000	135 000	135 000	540 000
-- wynagrodzenia etatowe	52 500	52 500	52 500	52 500	210 000
-- wynagrodzenia dodatkowe	37 500	37 500	37 500	37 500	150 000
-- stypendia i wynagrodzenia studentów i doktorantów	45 000	45 000	45 000	45 000	180 000
- koszty aparatury naukowo-badawczej, urządzeń i oprogramowania	5 212	47 510	38 598	38 598	129 918
- inne koszty bezpośrednie	0	229 733	120 853	44 958	395 544
Koszty pośrednie, w tym:	28 042	89 258	65 699	50 520	233 519
- koszty pośrednie OA	0	6 809	6 809	6 809	20 427
- pozostałe koszty pośrednie	28 042	82 449	58 890	43 711	213 092
Koszty ogółem	168 254	501 501	360 150	269 076	1 298 981

ZESTAWIENIE CAŁKOWITYCH KOSZTÓW NA POSZCZEGÓLNE LATA REALIZACJI

	Rok 2025	Rok 2026	Rok 2027	Rok 2028	Razem [PLN]
Koszty bezpośrednie, w tym:	140 212	412 243	294 451	218 556	1 065 462
- koszty wynagrodzeń i stypendiów, w tym:	135 000	135 000	135 000	135 000	540 000
-- wynagrodzenia etatowe	52 500	52 500	52 500	52 500	210 000
-- wynagrodzenia dodatkowe	37 500	37 500	37 500	37 500	150 000
-- stypendia i wynagrodzenia studentów i doktorantów	45 000	45 000	45 000	45 000	180 000
- koszty aparatury naukowo-badawczej, urządzeń i oprogramowania	5 212	47 510	38 598	38 598	129 918

- inne koszty bezpośrednie	0	229 733	120 853	44 958	395 544
Koszty pośrednie, w tym:	28 042	89 258	65 699	50 520	233 519
- koszty pośrednie OA	0	6 809	6 809	6 809	20 427
- pozostałe koszty pośrednie	28 042	82 449	58 890	43 711	213 092
Koszty ogółem	168 254	501 501	360 150	269 076	1 298 981

PLAN ZARZĄDZANIA DANYMI [w języku angielskim]

1. Opis danych oraz pozyskiwanie lub ponowne wykorzystanie dostępnych danych

Sposób pozyskiwania i opracowywania nowych danych i/lub ponownego wykorzystania dostępnych danych

The research is fully anonymous - no personal data is collected.

I. QUALITATIVE RESEARCH

Methods:

- (i) online focus groups, (n=50; 5 waves with 10 players who frequently buy loot boxes)
- (ii) in-depth online interviews (n=40)
- (iii) netnography - until data saturation - approximately 40-60 hours - online participant observation

II. QUANTITATIVE RESEARCH

Method: panel survey - conducted on a panel of a research agency

III. EXPERIMENTAL RESEARCH

Method: experimental online survey

The following professional software will be used during the data analysis phase: IBM SPSS Statistics Premium, MPlus and NVivo.

Pozyskiwane lub opracowywane dane (np. rodzaj, format, ilość)

I. QUALITATIVE RESEARCH: 1. Recordings of online interviews - mp3, mp4; 2. Recordings of online participant behaviour observations - mp4; 3. Transcriptions of qualitative interviews - doc; 4. Report - doc.

II. QUANTITATIVE SURVEY: 1. Matrix with preliminary and main quantitative survey working data - xls; csv or sav; 2. Data matrix with coded responses from preliminary and main quantitative survey - xls; csv or sav; 3. Files with aggregated results from analysis of quantitative data from main survey - xls, csv, sav; 4. Report - doc.

III. EXPERIMENTAL STUDY (QUANTITATIVE): 1. Matrix with preliminary data from pre-test and main quantitative survey - xls; csv or sav; 2. Data matrix with coded responses from pre-test and main quantitative survey - xls; csv or sav; 3. Files with aggregated results from analysis of quantitative data from main survey - xls, csv, sav; 4. Report - doc.

2. Dokumentacja i jakość danych

Metadane i dokumenty (np. metodologia lub pozyskiwanie danych oraz sposób porządkowania danych) towarzyszące danym

Data from the different phases presented in the detailed description of the study (phases I-III) will be grouped and stored in separate folders: QUALITATIVE STUDY; QUANTITATIVE STUDY; EXPERIMENTAL STUDY. In addition, subfolders will be created for the QUALITATIVE STUDY: FOCUS GROUPS; IDI; NETNOGRAPHY.

The metadata should include: Title of the project carried out (Loot boxes in video games: understanding, impact, and regulation) No. of the project carried out and names of the project team: Brzozowska-Woś, Magdalena; Schivinski, Bruno; Gołąb-Andrzejak, Edyta.

Selected data generated from experiments will be deposited in the MOST Wiedzy Open Research Data Catalog (common name - Bridge of Data) – repository provided by the Gdańsk University of Technology - and described using attributes compatible with general metadata standards. Metadata descriptions will be stored in JSON-LD format and will include, whenever possible, Persistent Identifiers (PID), such as ORCID or GRID.

Stosowane środki kontroli jakości danych

The data collected in the process of each qualitative study will be controlled on an ongoing basis by the researcher, e.g. by asking additional questions of the respondents and clarifying their answers. Data at the different stages of quantitative research (phases II and III) will be examined for quality and will undergo a cleaning process. Data deemed unreliable/ doubtful/ outliers will be removed.

3. Przechowywanie i tworzenie kopii zapasowych podczas badań

Przechowywanie i tworzenie kopii zapasowych danych i metadanych podczas badań

During the project, data will be stored on the computers of the project research team (three copies in total): Magdalena Brzozowska-Woś; Bruno Schivinski; Edyta Golab-Andrzejak. In addition, after the completion of each stage of the study, a backup copy will be created on an external drive held by the Project Manager.

Sposób zapewnienia bezpieczeństwa danych oraz ochrony danych wrażliwych podczas badań

There is no sensitive data in the project as no personal data is collected during the project - the research is fully anonymised. 4 copies of data from each stage of the project ensure that it is protected from possible loss.

4. Wymogi prawne, kodeks postępowania

Sposób zapewnienia zgodności z przepisami dotyczącymi danych osobowych i bezpieczeństwa danych w przypadku przetwarzania danych osobowych

Nie dotyczy

Sposób zarządzania innymi kwestiami prawnymi, np. prawami własności intelektualnej lub własnością. Obowiązujące przepisy

The legal requirements related to the management and commercialisation of intellectual property are governed by the Resolution of the Senate of the Gdańsk University of Technology No. 117/2021/XXV of 19 May 2021
https://link.pg.edu.pl/GdańskTech_intprop

The results of the research will be published in scientific articles in reputable journals at the end of each phase of the study as adopted in the detailed project schedule in the detailed project description (Table 2 Project lifecycle, page 8). Articles will be published under a CCBY licence.

5. Udostępnianie i długotrwałe przechowywanie danych

Sposób i termin udostępnienia danych. Ewentualne ograniczenia w udostępnianiu danych lub przyczyny embarga

Data will be shared with the Gdansk University of Technology's repository: MOST Wiedzy Open Research Data Catalog (common name Bridge of Data).
Selected data will be shared when the article based on it is published.

Sposób wyboru danych przeznaczonych do przechowania oraz miejsce długotrwałego przechowywania danych (np. repozytorium lub archiwum danych)

As far as long-term data storage is concerned, data shared on Bridge of Data will be stored indefinitely, while other data will be stored for 10 years on a hard drive and made available upon request. The Bridge of Data is CoreTrustSeal certified, which confirms the repository's trustworthiness and sustainability.

Metody lub narzędzia programowe umożliwiające dostęp do danych i korzystanie z danych

The data will be gathered and made available in file formats that can be processed by free or open-source software.

Sposób zapewniający stosowanie unikalnego i trwałego identyfikatora (np. cyfrowego identyfikatora obiektu (DOI)) dla każdego zestawu danych

The Bridge of Data provides each dataset a DOI identifier.

6. Zadania związane z zarządzaniem danymi oraz zasoby

Osoba (np. funkcja, stanowisko i instytucja) odpowiedzialna za zarządzanie danymi (np. data steward)

The Open Science Competence Centre of the Gdansk University of Technology Library (<https://pg.edu.pl/en/openscience>) will be the unit responsible for the quality of the data management plan and for the quality of the metadata describing datasets in Bridge of Data. Person responsible for data management will be the project Principal Investigator (dr hab. inż. Magdalena Maria Brzozowska-Woś) or a designated by her team member.

Środki (np. finansowe i czasowe) przeznaczone do zarządzania danymi i zapewnienia możliwości odnalezienia, dostępu, interoperacyjności i ponownego wykorzystania danych

Nie dotyczy

OŚWIADCZENIA ADMINISTRACYJNE

OŚWIADCZENIA KIEROWNIKA (PI)

Oświadczam, że

1. zadania badawcze objęte niniejszym wnioskiem nie są i nie były finansowane z NCN ani z innego źródła;
2. w przypadku ubiegania się lub uzyskania finansowania zadań badawczych objętych tym wnioskiem z innego źródła niż NCN:
 - a) w razie uzyskania finansowania z NCN
 - zrezygnuję z ubiegania się o finansowanie z innego źródła
 - albo
 - powiadomię osobę upoważnioną do reprezentowania podmiotu będącego wnioskodawcą o rezygnacji ze środków przyznanych na realizację zadań badawczych przez Dyrektora NCN;
 - b) w razie uzyskania finansowania z innego źródła
 - powiadomię osobę upoważnioną do reprezentowania podmiotu będącego wnioskodawcą o rezygnacji z ubiegania się o finansowanie w tym konkursie NCN
 - albo
 - zrezygnuję z przyjęcia finansowania z innego źródła;
3. w przypadku zakwalifikowania wniosku do finansowania wyniki badań uzyskane w wyniku realizacji projektu badawczego będą poddane ewaluacji i opublikowane w wydawnictwie/wydawnictwach o zasięgu międzynarodowym;
4. w przypadku zakwalifikowania wniosku do finansowania wyrażam zgodę na zamieszczenie, wraz z informacją o wynikach konkursu, na stronie podmiotowej NCN, popularnonaukowego streszczenia projektu;
5. zapoznałem się z zasadami doręczania decyzji Dyrektora NCN;
6. wyrażam zgodę na dokonanie weryfikacji wniosku przy pomocy oprogramowania antyplagiatowego oraz umieszczenie treści wniosku w bazie danych oprogramowania;
7. zapoznałem się z treścią Kodeksu Narodowego Centrum Nauki dotyczącego rzetelności badań naukowych i starania o fundusze na badania i zobowiązuję się do jego stosowania;
8. w przypadku uzyskania finansowania zobowiązuję się do przebywania przez co najmniej 50% czasu trwania projektu na terytorium Rzeczypospolitej Polskiej i pozostawania w dyspozycji podmiotu realizującego projekt na zasadach określonych w Regulaminie przyznawania środków na realizację zadań finansowanych przez Narodowe Centrum Nauki w zakresie projektów badawczych.

Akceptacja oświadczenia: TAK

OŚWIADCZENIA KIEROWNIKA PODMIOTU / OSOBY UPRAWNIIONEJ DO REPREZENTACJI

Oświadczam, że

1. zadania badawcze objęte niniejszym wnioskiem nie są i nie były finansowane z NCN ani z innego źródła;
2. w przypadku ubiegania się lub uzyskania finansowania zadań badawczych objętych tym wnioskiem z innego źródła niż NCN:
 - a) w razie uzyskania finansowania z NCN
 - zrezygnuję z ubiegania się o finansowanie z innego źródła
 - albo
 - zrezygnuję ze środków przyznanych na realizację zadań badawczych przez Dyrektora NCN
 - b) w razie uzyskania finansowania z innego źródła
 - zrezygnuję z ubiegania się o finansowanie w tym konkursie NCN
 - albo
 - zrezygnuję z przyjęcia finansowania z innego źródła;
3. działając w imieniu podmiotu, który reprezentuję, w przypadku uzyskania finansowania projektu badawczego zobowiązuję się do:
 - a) włączenia projektu badawczego do planu zadaniowo-finansowego podmiotu;
 - b) zatrudnienia kierownika projektu badawczego oraz wykonawców niezbędnych do realizacji projektu badawczego na zasadach zgodnych z wnioskiem i warunkami konkursu;
 - c) zatrudnienia kierownika projektu na cały okres realizacji projektu na podstawie umowy o pracę na co najmniej połowę pełnego wymiaru czasu pracy;*
 - d) zapewnienia warunków do realizacji prowadzonych badań, w tym udostępnienia przestrzeni biurowej/laboratoryjnej oraz aparatury naukowo-badawczej niezbędnej do realizacji tych badań;
 - e) zapewnienie obsługi administracyjno-finansowej realizacji projektu badawczego;
 - f) sprawowania nadzoru nad realizacją projektu badawczego i prawidłowością wydatkowanych na ten cel środków finansowych;
4. w przypadku zakwalifikowania wniosku do finansowania wyrażam zgodę na zamieszczenie, wraz z informacją o wynikach konkursu, na stronie podmiotowej NCN, popularnonaukowego streszczenia projektu;
5. zapoznałem się z zasadami doręczania decyzji Dyrektora NCN;
6. wyrażam zgodę na dokonanie weryfikacji wniosku przy pomocy oprogramowania antyplagiatowego oraz umieszczenie treści wniosku w bazie danych oprogramowania;
7. zapoznałem się z treścią Kodeksu Narodowego Centrum Nauki dotyczącego rzetelności badań naukowych i starania o fundusze na badania i zobowiązuję się do jego stosowania;
8. jestem świadomy/a, że w przypadku przedłużenia czasu realizacji projektu, jestem zobowiązany/a do kontynuacji zatrudnienia kierownika projektu na podstawie umowy o pracę na co najmniej połowę pełnego wymiaru czasu pracy przez cały okres przedłużenia okresu realizacji projektu, przewidzianego we wniosku*
9. podmiot, który reprezentuję, nie pozostaje pod zarządem komisarycznym ani nie znajduje się w toku likwidacji lub postępowania upadłościowego.

*nie dotyczy osób pobierających świadczenia emerytalne z systemu ubezpieczeń społecznych

Akceptacja oświadczenia: TAK

OCHRONA DANYCH OSOBOWYCH

INFORMACJA O ZASADACH PRZETWARZANIA DANYCH OSOBOWYCH

Na podstawie art. 13 ust. 1 i 2 rozporządzenia Parlamentu Europejskiego i Rady (UE) 2016/679 z dnia 27 kwietnia 2016 r. w sprawie ochrony osób fizycznych w związku z przetwarzaniem danych osobowych i w sprawie swobodnego przepływu takich danych oraz uchylenia dyrektywy 95/46/WE (ogólne rozporządzenie o ochronie danych) (Dz. Urz. UE L 2016, Nr 119, s. 1) informujemy osoby wnioskujące o finansowanie projektu badawczego, działania naukowego, stażu, stypendium doktorskiego lub komponentu badawczego, że:

- a) Narodowe Centrum Nauki z siedzibą w Krakowie przy ul. Twardowskiego 16, 30-312 Kraków jest administratorem Pani/Pana danych osobowych,
- b) kontakt z wyznaczonym Inspektorem Ochrony Danych w Centrum jest możliwy za pomocą poczty elektronicznej pod adresem iod@ncn.gov.pl, telefonicznie pod numerem +48 12 341 9113 lub bezpośrednio w siedzibie administratora danych osobowych,
- c) podstawę prawną przetwarzania Pani/Pana danych osobowych przez Centrum stanowi art. 6 ust. 1 lit. c ogólnego rozporządzenia o ochronie danych w związku z art. 20 ustawy z dnia 30 kwietnia 2010 r. o Narodowym Centrum Nauki (Dz. U. 2018 poz. 947 z późn. zm.),
- d) Pani/Pana dane osobowe będą przetwarzane w celu:
 - rozpatrywania wniosku o finansowanie projektu badawczego, działania naukowego, stażu, stypendium doktorskiego lub komponentu badawczego,
 - nadzoru, obsługi finansowo-księgowej, kontroli w trakcie jak i po zakończeniu projektu badawczego, działania naukowego, stażu, stypendium doktorskiego lub komponentu badawczego, oceny ich realizacji i rozliczenia umów o finansowanie – w przypadku przyznania środków finansowych na realizację projektu badawczego, działania naukowego, stażu, stypendium doktorskiego lub komponentu badawczego,
 - przeprowadzania ewaluacji realizacji zadań Centrum, sprawozdawczości, upowszechniania w środowisku naukowym informacji o przyznaniu przez Centrum finansowaniu badań, realizacji innych czynności regulowanych przepisami prawa powszechnie obowiązującego oraz w celach archiwalnych,
- e) od momentu pozyskania, Pani/Pana dane osobowe będą przetwarzane przez okres niezbędny do realizacji celów wskazanych w lit d), dochodzenia związanych z nimi roszczeń, okres wymagany przez przepisy prawa powszechnie obowiązującego oraz przez okres przechowywania zgodny z instrukcją kancelaryjną Centrum i Jednolitym Rzeczowym Wykazem Akt,
- f) podanie przez Panią/Pana danych osobowych stanowi wymóg ustawowy i bez ich podania nie można zrealizować celów wskazanych w lit d),
- g) odbiorcami Pani/Pana danych osobowych mogą być wyłącznie podmioty uprawnione do uzyskiwania danych osobowych na podstawie przepisów prawa, oraz w zakresie określonym w art. 31 ustawy z dnia 30 kwietnia 2010 r. o Narodowym Centrum Nauki (Dz. U. 2018 poz. 947 z późn. zm.) osoby korzystające ze strony podmiotowej Centrum,
- h) Pani/Pana dane osobowe mogą być powierzone do przetwarzania podmiotom zewnętrznym takim jak m.in. Ośrodek Przetwarzania Informacji - Państwowy Instytut Badawczy z siedzibą przy al. Niepodległości 188b, 00-608 w Warszawie w ramach realizowanych przez nie usług na podstawie umów o powierzenie danych osobowych, a podmioty te są również zobowiązane do zachowania poufności przetwarzanych danych,
- i) przysługuje Pani/Panu prawo dostępu do treści swoich danych, sprostowania swoich danych osobowych oraz ograniczenia przetwarzania swoich danych osobowych,
- j) przysługuje Pani/Panu prawo wniesienia skargi do Prezesa Urzędu Ochrony Danych Osobowych w przypadku naruszenia przepisów ogólnego rozporządzenia o ochronie danych.