Driving Public Values through LinkedIn. Insights from the EU Digital & Tech Account

Lukas Weller [a*], *Stanislav* Mahula [b], *Joep* Crompvoets [c]

[a] Faculty of Social Sciences, Katholieke Universiteit Leuven (KU Leuven), Leuven, Belgium, lukas.weller@student.kuleuven.be, 0009-0002-4151-6620

[b] Faculty of Social Sciences, Katholieke Universiteit Leuven (KU Leuven), Leuven, Belgium, 0000-0003-0568-9604

[c] Faculty of Social Sciences, Katholieke Universiteit Leuven (KU Leuven), Leuven, Belgium, 0000-0003-1077-597X

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Abstract. As digital transformation progresses, platforms such as LinkedIn present unique opportunities for professional engagement in public governance and sustaining public values, yet their potential remains underexplored. This study analyses the communication practices of the EU Digital & Tech LinkedIn account – a channel for promoting Europe's digital transformation initiatives led by the European Commission. By analyzing 159 posts with their engagement metrics and user comments over a six-month period in 2024, we identified key patterns in content type, sentiment, and thematic focus. Informational posts dominate the account's feed, with an emphasis on topics such as artificial intelligence, cybersecurity, and data governance. These posts generate the highest interaction scores, reflecting LinkedIn's suitability for professional and policy-driven discussions and reinforcing the platform's value in generating thoughtful, substantive exchanges. LinkedIn is likely to promote public values such as transparency, inclusivity, and collaboration effectively when communication strategies prioritize detailed content and meaningful stakeholder interaction. However, the analysis also reveals missed opportunities for direct engagement, such as responding to user comments, posing open-ended questions, or leveraging other interactive features like polls or events, possibly allowing users to take on more active roles as prosumers. By embracing more participatory formats, public sector accounts could foster richer interaction and co-ownership of policy narratives. Ultimately, we underscore LinkedIn's underused potential as a dynamic platform for collaborative innovation in digital public governance, offering actionable insights into how communication strategies can strengthen trust, responsiveness, and legitimacy in the public sector.

Keywords. Public Sector Communication, Public Values, Transparency, Inclusivity, LinkedIn, Stakeholder Engagement, Social Media Strategy, Policy Communication, Professional Networking

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1 Introduction

Although the latest innovations like artificial intelligence (AI), blockchain, and big data become more advanced each day, their successful implementation depends on technological infrastructure, regulatory frameworks, and organizational readiness (F. Davis, 1989; Rogers, 1983; Tornatzky & Fleischer, 1990). Integrating and managing these novel tools into governmental processes and services has become an indispensable part of advancing digital public governance (DPG). Public sector's key stakeholders, i.e., citizens and businesses, may have various perceptions of digital transformation. While the private sector is often seen as more tech-savvy and fast-adopting modern tools, individual users sometimes require more intensive mentoring to ensure everyone participates. An important aspect of DPG's external perception is its communication with these stakeholders.

The tools and platforms used to explain or simply make these innovations public often determine whether they are adopted or rejected in everyday life. In recent years, much of the focus has been on the technologies themselves, but an increasingly overlooked factor is the medium through which their purpose and impact are expressed (Milakovich, 2021). This is where communication plays a vital role. While its core principles – such as e.g., information transmission and audience engagement – remain intact, the rise of Facebook and other social media platforms since the mid-2000s has altered the traditional gatekeeping role of journalists (Gilardi et al., 2022; Valenzuela et al., 2019). Communication has evolved into a complex web of digital interactions that span borders, disciplines, and sectors, mediated increasingly by platforms and algorithms rather than professional editors (Grewal et al., 2022).

Therefore, as AI systems become more integrated into DPG, as questions of digital sovereignty gain attention, and as citizens demand more transparency in government operations, how these messages are communicated determines their societal values (Chen et al., 2023; Mergel, 2012). Public trust in these processes is not only about the content of policies but also about how governments articulate their intentions, engage stakeholders, and invite dialogue through, e.g., events (Boulianne, 2019) or social media interaction (Wukich, 2021). This makes it a fundamental and well-suited solution for building trust and collaboration and driving informed decision-making.

Social media has played a key role in digital transformation. Platforms like Twitter and Facebook have long been recognized for their ability to connect governments with citizens in real-time by spreading information widely and quickly (Haro-de-Rosario et al., 2018). Numerous examples of how public organizations use social media to create public value include, e.g., early disaster warnings through Indonesia's Twitter Tsunami Early Warning Network (est. in 2012), citizen engagement via participatory budgeting in American city councils (2013), and coordinating emergency relief during Hurricane Sandy through real-time social media mapping (Criado et al., 2013; Muniz-Rodriguez et al., 2020). However, private platforms are often criticized for increasing interactions and reactive behaviors resulting in extended time spent on the platform (Haro-de-Rosario et al., 2018).

Moreover, the lack of algorithmic transparency – particularly regarding the use of personal data – raises concerns. In the context of political discourse, these issues have been linked to increased exposure to radicalized content, targeted political advertising, and the spread of misinformation and fake news (Lewandowsky & Siri, 2023; Zerres, 2024). Conversely, LinkedIn has a slightly different emphasis on a professional and focused alternative uniquely suited for deeper, more thoughtful engagements.

With its audience of professionals, academics, and decision-makers, LinkedIn claims to be less about viral trends and more about substantive discussions on policy, strategy, and innovation (Graziano et al., 2023; Mergel, 2012). While this does not entirely reflect present conditions, as LinkedIn, too, follows a basic social media strategy, stakeholders are interested in a more professional environment (Graziano et al., 2023; Mergel, 2012). For example, public organizations worldwide have already actively engaged on LinkedIn, including major bodies such as the United Nations (5.8 million followers), the U.S. Department of State (1.4 million), and the European Commission (2.2 million) (European Commission, 2025b; United Nations, 2025; U.S. DOS, 2025). The content shared by these organizations is generally strategic, emphasizing professional engagement, policy advocacy, and targeted stakeholder interactions within a network which has been built on trust (Macnamara & Zerfass, 2012; Rus et al., 2021). Moreover, user interactions on LinkedIn tend to reflect more targeted inquiries and specific attitudes towards these public institutions (J. Davis et al., 2020).

However, despite its potential, the use of LinkedIn as a communication tool for leveraging public values has received limited academic attention yet to be explored. Therefore, this paper adopts a case study approach and focuses on a particular LinkedIn account, examining its potential to contribute to advancing public values using quantitative and qualitative research methods. Specifically, it investigates the communication strategies of the EU Digital & Tech account (EUDT), a key channel for promoting Europe's digital transformation initiatives. Though substantially smaller in following (51,000) than the parent account, the EUDT is used to share critical updates on topics such as AI governance, data privacy, and cybersecurity, engaging professionals in shaping the future of European digital governance (European Commission, 2025a). Examining the EUDT account, rather than the

broader EC account, allows for a more focused and detailed analysis of strategic communication tailored specifically to digital governance stakeholders.

The EUDT can only be considered an indicative case study, given that engagement patterns and user demographics may vary for different institutional contexts. However, the EUDT still offers a compelling illustration of the EC's primary digital governance messages, making it a valuable case for exploring LinkedIn's broader potential in public sector communication. Hence, the research is guided by the following question: *How can LinkedIn be effectively leveraged to promote audience engagement, support professional communication and uphold public values in digital governance?*

We also pose three sub-questions to guide our research processes:

1. *SQ1. What types of activity generate the highest engagement on the EU Digital & Tech LinkedIn account?*
2. *SQ2. What themes and sentiments emerge in audience comments on these posts?*
3. *SQ3. How can the EU Digital & Tech LinkedIn account enhance engagement with professional stakeholders such as policymakers, digital industry actors, and academic experts in the context of digital governance?*

By addressing these questions, this paper aims to contribute to the broader understanding of the role of communication in navigating the developing complexities of the digital age. It then explores how LinkedIn can serve as a professional engagement tool and build trust, inclusivity, and innovation in digital public governance.

The relevance of this research is multifold. First, LinkedIn's ability to facilitate discussions on AI governance reflects its alignment with the focus on promoting technology responsibly. Similarly, by analyzing interactions with the public, this research contributes to understanding how communication strategies promote public governance values like transparency, inclusivity, and responsiveness. LinkedIn's professional audience makes it a substantial platform for taking discussions on digital sovereignty and cybersecurity, ensuring that technical policies are effectively communicated to industry experts and, finally, decision-makers.

The following chapter offers insights into related works bridging stakeholder engagement and public values at the intersection of social media and explores frameworks for unlocking the full strategic potential. Then, the data source and preprocessing pipeline, as well as the topic modeling methodologies used, are assessed. This study combines a social science approach with a methodology from information sciences. Afterwards, all finalized results for this paper are discussed. Lastly, all findings are summarized, and further research is suggested.

2 Related Work

When digital transformation shapes governance, the role of social media platforms in addressing the gap between policymakers and stakeholders has become increasingly significant. While traditional forms of communication remain vital, the immediacy, accessibility, and interactivity of social media offer reliable opportunities for promoting dialogue, transparency, and collaboration. Among these platforms, LinkedIn has emerged as a space aimed at professionals from different fields to discuss governance, policy innovation, and digital transformation and drive interaction.

2.1 Public Engagement in Digital Public Governance

Social media platforms, which have been integrated into governmental communication strategies over the last decade, remain key tools for informing citizens and encouraging dialogue between diverse stakeholders. DPG increasingly relies on these effects on effective communication, primarily to promote transparency, participation, and collaboration among users. Mergel and colleagues (2012) highlight that digital tools have transformed communication from a unidirectional process to *"bidirectional exchanges"*, enabling governments to build trust and accountability in ways previously unavailable, similar to turning *consumers* into so-called *prosumers* (Bartosik-Purgat & Filimon, 2022).

Despite their transformative potential, not all platforms are equally effective for engaging professional stakeholders. Studies from different fields within public sector communication identify significant limitations in widely used platforms such as Twitter and Facebook, which – though effective for real-time updates and mass dissemination – often only drive superficial interactions (Lai & Fu, 2020; Rauchfleisch et al., 2023). Additionally, their reliance on broad audiences limits meaningful discussions on complex topics, such as digital governance policies, which require depth and nuance (Rauchfleisch et al., 2023).

LinkedIn, however, serves as a professional (and policy-driven) engagement platform. Unlike competitors with larger user numbers, LinkedIn specifically targets *"the world's professionals to make them more productive and successful"*, home to an environment with discussions on society, strategy, and innovation (LinkedIn Ireland Unlimited Company, 2016). Gestel and Grotenbreg (2021) argue that LinkedIn's features, such as longer-form content and a professional tone, make it particularly suited for driving sustained interactions and collaborative dialogue, which is essential in the context of public governance.

2.2 Governance and Policy (Non-Profit) Communication

Policy communication, especially in areas that require particular or expertise understanding, depends on the ability to express complex ideas clearly and effectively to the relevant audiences. Social media platforms are useful tools in this process, providing the reach and prompt action necessary to inform and get feedback. Studies on risk and crisis communication underscore the utility of platforms like Twitter and Facebook in disseminating policy updates, such as during the COVID-19 pandemic (Wang et al., 2021). However, their focus on mass communication limits their ability to engage technical and professional audiences on specific policy matters (Wang et al., 2021; Wukich, 2020).

In this narrower context, LinkedIn has also been recognized as a platform uniquely positioned to address these limitations. Its professional user base and tools like targeted advertising, event promotion, and long-form posts enable governments to communicate more effectively with industry experts, policymakers, and researchers. Faber (2022) emphasizes that LinkedIn's professional structure opens the door for thoughtful exchanges and professional engagement. It serves as a key channel for policy dissemination and collaboration in the public sector, particularly focusing on governance-related topics. This aligns with municipalities' strategies, as their LinkedIn content predominantly focuses on *"governance and general support*" (Faber, 2022).

Analyzing how different types of posts perform on social media platforms has been a recurring focus in the literature. Lovejoy & Saxton (2012) categorize social media posts from governments and non-profit organizations into three broad types: informational, interactive (communal), and action-oriented. Informational posts, i.e. those sharing detailed reports or policy updates, often generate high engagement due to LinkedIn's emphasis on large-format content. Interactive posts, including those encouraging comments or discussions, also perform well, as LinkedIn users are often motivated by the opportunity to share expertise and network with peers. Action-oriented posts, such as promoting events, can also succeed on LinkedIn when they align with the platform's professional tone and audience (Lovejoy & Saxton, 2012). Understanding the impact of these post types on engagement levels helps refine communication strategies, the authors specify.

2.3 Optimizing LinkedIn for Digital Governance Purposes

LinkedIn's features offer well-thought-out opportunities for enhancing stakeholder engagement, yet they remain underutilized in many governance contexts. Mergel (2012) notes that public agencies often underutilize professional tools like analytics and audience targeting, which are critical for maximizing the potential of platforms like LinkedIn to enhance governance-related communication. Studies examining LinkedIn's use in governance highlight several best practices. Faber (2022) found that posts combining detailed, relevant content with clear calls to action generate the highest levels of engagement. Similarly, targeted hashtags and audience segmentation significantly enhance post visibility and relevance. Along with other platforms, video content, as well as on LinkedIn, performs better than text content (Du et al., 2020). These findings suggest that advanced digital platforms, such as LinkedIn, can likely be strategically employed to engage professional audiences and drive interactions that align with public governance values like transparency and inclusiveness (Chen et al., 2023).

While LinkedIn remains underexplored in the literature, insights from studies of other platforms help contextualize its potential. Özdemir et al. (2025), in their analysis of EU executive communication on Twitter, identify a shift from neutral output reporting toward more participatory and engagement-oriented practices, which they term *opinionated communication*. This strategy combines reporting on institutional actions with individual framing, responsiveness, and inclusivity cues. These elements are increasingly important in public sector communication and point to untapped potential in LinkedIn's own interactive features, such as polls, comment replies, or stakeholder mentions. Studies also show that polls generate higher engagement rates than standard posts, as they invite direct participation and provide immediate feedback (Edney et al., 2018; Mergel, 2012).

Moreover, Özdemir et al. (2025) offer a useful distinction between four forms of legitimacy – input, throughput, output, and identity – which can help conceptualize communication strategies. Transparency and responsiveness support throughput legitimacy, while inclusive and participatory tools strengthen input legitimacy. Within this framework, LinkedIn's professional user base, structured format, and engagement tools could be leveraged to support trust and legitimacy in DPG. Despite emerging best practices, academic evidence on LinkedIn's role in this area remains limited, highlighting the need for further empirical research into how public organizations

communicate professionally and meaningfully on the platform.

3 Data and Methodology

This study adopts a mixed-method data approach to analyze LinkedIn's role as an effective communication tool in adhering to public values. Using the primary data collected directly from the EU Digital & Tech account on LinkedIn, this study investigates engagement patterns, thematic trends, and sentiment in professional interactions (Batrinca & Treleaven, 2015). The aim of the analysis is also to explore ways in which the platform could be optimized for public-sector communication. The selected research method provides a comprehensive and nuanced evaluation for more accurate results, and it was chosen due to its flexibility and potential for reliable results, which will be further explained in the following subchapters (Olteanu et al., 2018).

3.1 Data Collection

The dataset for this study has been drawn from LinkedIn posts, including all interactions with various users on the **EU Digital & Tech** account and the associated posts. Data collection focuses on activities shared between July 1 and December 31, 2024, capturing current trends and discussions relevant to digital transformation, AI integration, and cybersecurity. This 6-month period ensures the analysis reflects up-to-date practices and audience interactions in a dynamic landscape.

Accessing social media data is commonly facilitated through public APIs and open-source programmable frameworks (Batrinca & Treleaven, 2015). However, due to increasingly restricted API accessibility by private corporations, **PhantomBuster** – a tool which uses LinkedIn's API to extract contents automatically – was used (Perriam et al., 2020). Hence, the data extracted contains:

(1) post content (text used as content, multimedia and links shared within posts),

(2) engagement metrics (quantitative measures including likes, comments and shares)

(3) audience interactions (text data from user comments and potential replies)

(4) metadata (date- and timestamps).

PhantomBuster is primarily utilized to generate leads in a marketing environment and might include biases of commercial data extraction tools that are not specifically optimized for research purposes. Moreover, as PhantomBuster does not capture content updates or deletions, the dataset cannot reflect real-time changes, potentially affecting the accuracy of insights. Another concern is the authenticity of engagement: user interactions may include inputs from bots or inactive accounts, which can distort patterns of actual stakeholder involvement. However, a manual spot-check procedure was adopted to mitigate the risk of incomplete or erroneous data and improve the robustness of the findings. Specifically, 5% of the extracted posts and comments were randomly selected to verify their accuracy against the live LinkedIn interface. This approach provides a level of quality control that strengthens the reliability of the dataset, though it does not guarantee the total elimination of automated extraction anomalies (Olteanu et al., 2018).

3.2 Data Preprocessing

To ensure the data is suitable for analysis, preprocessing is conducted via Natural Language Processing (NLP) in several structured steps (Egger & Gokce, 2022; Pradha et al., 2019). This is standard practice in information science to ensure that textual data is cleaned, standardized, and ready for further, primarily qualitative, examination (Batrinca & Treleaven, 2015). To automate this process efficiently, Python-based software and databases *NLTK* and *spaCy* were used, both of which are widely recognized for their NLP capabilities and open source (ExplosionAI GmbH, 2024; NLTK Project, 2024). NLTK was applied for tokenization, stop word removal, and stemming, while spaCy supported part-of-speech tagging (assigning a grammatical category like noun, verb, adjective, etc.) and named entity recognition to assist in filtering personal names and non-English content. The combined use of both tools ensured the employment of complementary strengths in this structured approach.

The preprocessing steps, including their description, are as follows:

1. **Data Cleaning**: Non-text elements such as emojis, special characters, and URLs are removed to eliminate noise from the dataset – only textual content remains.

2. **Tokenization**: Text is split into individual units (tokens), such as words or phrases. Sentences like "AI governance is essential!" are tokenized into "AI", "governance", "is", and *"essential"* – removing periods and exclamation marks.

3. **Stop Word Removal**: Commonly used words (e.g., "and," "the," "is") that do not contribute to the thematic or sentiment analysis are filtered out using pre-defined lists. For this research, a specific list of words suiting LinkedIn's professional language has been chosen, including terms like "via", "regarding," and conjunctions like "therefore," which appear frequently in formal or policy-related posts but contribute little to semantic depth.

4. **Stemming**: Words are reduced to their word stem to ensure consistency and suitability for comparison. For example, variations such as *"governing"* and *"governed"* are standardized to *"govern*".

5. **Normalization**: All text is converted to lowercase to unify the dataset and avoid treating variations like "AI" and "ai" as different words.

6. **Data Structuring**: Preprocessed text is finally structured into a relational database, ensuring each post or comment is linked to its associated metadata (e.g., engagement metrics, hashtags, and timestamps). Non-English language and individual names are then excluded from further analysis due to the often unreliable automatic distinction between individual names (persons) and the correct identification of other languages (Keraghel et al., 2024).

This organization facilitates efficient retrieval and analysis (Egger & Gokce, 2022). The resulting clean and standardized text fits advanced analyses such as topic modeling, sentiment scoring, and engagement evaluation. If not mentioned otherwise, all general data is evaluated using Microsoft Excel.

3.3 Integrated analysis

Content analysis is conducted to categorize LinkedIn posts and assess their engagement performance (Batrinca & Treleaven, 2015). Posts are divided into three main types: informational, interactive, and action-oriented posts (Lovejoy & Saxton, 2012). For example, a post to invite stakeholders to contribute to a "*Call for Evidence on the Protection of Minors Online*" would be categorized as an action-oriented post, as it encourages direct participation from the audience in the policymaking process. By contrast, a post announcing the launch of the Digital Maturity Assessment tool ("*A new tool […] is now available*!")(European Commission, 2024b), developed by the European Digital Innovation Hubs Network, would be classified as an informational post. Then, all engagement metrics (likes, comments, shares) are analyzed for each category to determine those types of posts generating the highest interaction scores.

Additionally, the use of features, such as visuals and multimedia, is assessed to understand their impact on engagement. For example, an informational post detailing an AI ethics report might include a visual infographic and relevant images. Its engagement metrics are then compared with those of an interactive post of another category that, e.g., aims at starting a discussion about AI governance. Patterns recognized can be used to identify effective communication strategies for LinkedIn's professional user base. To be able to compare the three categories of posts in terms of engagement, the **interaction score** *(I)* was calculated as follows:

$$I = L + C + R$$

There, L stands for the number of likes on the post, C for the number of comments and R for the number of times the post was shared. *Thematic analysis* identifies key topics and recurring themes in LinkedIn posts and audience comments, shedding light on stakeholder priorities (Batrinca & Treleaven, 2015). After preprocessing the text, Latent Dirichlet Allocation (LDA) is used to uncover clusters of related topics. This is done via Python-based software and associated libraries and is an established method for social media analysis (Ostrowski, 2015). For example, comments on AI governance posts may reveal themes like *"ethics," "accountability,"* and *"transparency,"* while cybersecurity discussions may center around *"data breaches"* and *"privacy concerns."* In addition to topic modeling, keyword analysis validates LDA results by highlighting frequently used terms reflecting users' interests (Ostrowski, 2015). Themes in these comments can be used in the recommendations to align post's contents better with users' interests, showing how effectively LinkedIn posts address professional concerns.

The *analysis* of audience/con-/prosumer *sentiment* is another critical aspect of evaluating social media communication strategies. This method provides insights into the emotional tone of audience responses, enabling organizations to understand public perception of their messages (Thelwall, 2018). Studies highlight that sentiment analysis might help governments identify areas of public support or discontent, providing a foundation for refining communication strategies (Zavattaro et al., 2015). Therefore, **TextBlob** (https://github.com/sloria/textblob), a

tool within a Python framework, was used to classify comments as positive, neutral, or negative. For instance, "*Love this! Video games are […] a great way for parents to learn with their kids!*" would be positive, while "*The problem is that the EU doesn't understand the problem...*" would be referred to as negative.

4 Results

This study offers actionable insights for improving the EC's LinkedIn communication strategy. In this section, we highlight how stakeholders engage and how their emotional responses may align with governance objectives, ensuring communication strategies remain foundational on trust and inclusivity, which is a common practice in successful long-term communication.

4.1 Content Analysis

Over the chosen six-month period between July 1 and December 31, 2024, the EU Digital & Tech account on LinkedIn made 159 postings, accounting for almost daily activity. The posts can be divided into three categories: informational (109 posts), interactive (10 posts), and action-oriented (40 posts). The posts collectively summed up 30,662 likes, 596 comments, and 3,887 shares (reposts), resulting in a total of 35,145 interactions.

The weighted average interaction score (I) across all post categories equals 221.1. Informational posts demonstrated the highest average interaction score, followed by interactive and action-oriented posts. Table 1 below presents the interaction scores:

Tab. 1. Interaction Scores per Category

Post category	No.	Share (%)	Average Interaction Score (I)
Informational	109	68.55	243.4
Interactive	10	6.29	198.6
Action-oriented	40	25.16	165.7

Furthermore, no postings assessed were published as text-only, as they all included either an image, document or video. Image-based posts demonstrated the best performance, 3.28% above the average. Document-based posts had a lower interaction score of 182, representing a 17.69% decrease compared to the average. Video posts performed the worst, falling 55.76% below the average. Table 2 below presents the distribution and engagement of posts per attachment type.

Tab. 2 - Interaction Scores per Feature Type

Post type	No.	Share (%)	Interaction Score (I)
Image	143	89.94	228.35
Document	11	6.92	182
Video	5	3.14	97.8

4.2 Thematic Posting Analysis

The standalone keyword distribution among postings directly by the EUDT account (conducted with stemmed terms), without addressing comments, highlights a strong emphasis on digital and European themes used by the LinkedIn account. The term "*ai*" appears most frequently, underscoring a central focus on artificial intelligence. There is a noticeable distinction between "*EU*" and "*European*" in the account's postings as well. Although often used interchangeably in the daily language, the term "*EU*" likely emphasizes the European Union's role as a regulatory and legislative authority as the account focuses on policies, laws, and frameworks that specifically target

different stakeholders from the tech sector. In contrast, "European" may highlight a sense of community and shared identity, rather focused on collaboration, inclusivity, and collective progress.

The table below illustrates the frequency of the terms mentioned.

Tab. 3 - Account posting frequency

Stemmed term	Mentions
ai	260
digit	256
eu	224
european	128

A more holistic insight comes from the LDA analysis conducted on the stemmed text data from LinkedIn posts. It identifies key topics, each characterized by the five most significant words.

Tab. 4 - Integrated LDA Results of Topic Modeling from Original Posts

Topic	Word 1	Word 2	Word 3	Word 4	Word 5
Topic 1P	infrastructur	european	eu	support	connect
Topic 2P	eu	ukrain	digit	cybersecur	digitaleu
Topic 3P	ai	eu	act	european	euro
Topic 4P	digit	eu	onlin	digitaleu	data
Topic 5P	data	eu	regist	event	simpl

These topics provide an overview of the dominant themes that the account uses and can thus be compared to the themes that users mention the most. Topic 1P emphasizes terms like "*infrastructure,*" "*European*," and "*support,*" indicating a focus on connectivity, European initiatives, and collaborative efforts. Topic 2P highlights words such as "*cybersecurity*," "*Ukraine*," and "*digital*," pointing to discussions surrounding digital security, geopolitical concerns, and professional technology-related themes. Furthermore, Topic 3P centers around terms reflecting a focus on artificial intelligence and highlights this together with regulatory frameworks and the broader European digital strategy. Topic 4P emphasizes discussions on digital transformation, online platforms, and data-driven initiatives, while Topic 5P includes terms such as "*data*," "*register*," and "*event*," pointing to themes of data governance, event participation, and possibly simplified processes for digital engagement.

4.3 Thematic Comments Analysis

The dataset consists of 596 comments containing 12,728 stemmed terms, of which 92.6% were identified as written in English. The remaining 7.4% were categorized as individual names (approximately 75%) and other languages (approximately 25%). The latter two have not been considered within the analysis (see chapter 3.2). Only five comments were written by EUDT moderators.

The keyword distribution highlights the dataset's focus on European themes (*"eu")* and artificial intelligence (*"ai"*). Other often-mentioned terms emphasize digital transformation and reflect the also technological orientation of the account. Additionally, terms like *"innov", "data", "ethic",* and *"discuss"* suggest nuanced discussions around innovation, ethics, and policymaking in digital and AI contexts. This distribution underscores the centrality of technology and governance themes in the dataset.

Tab. 5 - User comments frequency

Stemmed term	Mentions
eu	80
ai	76
digit	41
tech	35
onli	32

The following table highlights the results of the LDA analysis conducted on the stemmed text data from user comments.

Tab. 6 - Integrated LDA Results of Topic Modeling from User Comments

Topic	Word 1	Word 2	Word 3	Word 4	Word 5
Topic 1U	good	tech	eu	time	new
Topic 2U	ai	great	data	eu	digit
Topic 3U	ai	eu	european	europ	digit
Topic 4U	ai	data	protect	eu	innov
Topic 5U	europ	ai	cybersecur	digit	act

Topic 1U emphasizes terms like "*good*," "*tech*," and "*time*," likely indicating a focus on technological advancements and positive developments. Topic 2U highlights words such as "*ai*," "*great*," and "*data*," pointing to discussions on artificial intelligence, its potential, and data-driven innovations. Topic 3U focuses on AI in the European context, possibly focused on its alignment with regional priorities and broader EU initiatives. Moreover, Topic 4U highlights data protection and innovation themes, underscoring the importance of implementing digital advancements. Lastly, Topic 5U mentions cybersecurity and AI, particularly emphasizing Europe's efforts to act decisively concerning digital security and resilience.

4.4 Sentiment analysis

The sentiment analysis of the LinkedIn comments provides insights into the discussion's tone and nature. The breakdown of comments based on their tone is presented in the figure below.

Tab. 7 - Sentiment analysis of users' comments

Sentiment	Count	Share
Positive	287	48%
Neutral	270	45%
Negative	39	7%

Most comments (287) were categorized as positive, reflecting optimism or enthusiasm. For instance, this comment expresses positivity by highlighting progress and ethical considerations in AI: *"Thinking about AI, which is not only tech and engineering but also requires ethics and responsibility. It's inspiring to see progress in this area."*

Meanwhile, neutral sentiments indicate that much of the discourse was factual or was missing a strong emotional undertone. This comment, for example, poses a question without an explicit emotional tone: *"Is it possible to see who submitted these proposals and what are they about?"*

Negative sentiments were the least frequent. In a negative comment, e.g., the user expresses a strong emotional reaction to perceived setbacks in equity: *"It gives me chills down my spine that we're regressing when it comes to basic equity."*

All in all, we observe that the LinkedIn discussion, based on the data of the EUDT account, is predominantly neutral to positive, suggesting a constructive and balanced engagement. Only a tiny fraction of the comments reflects dissatisfaction or criticism. It is important to mention that comments or contents that may have been deleted before extracting data have not been included in the analysis.

5 Discussion

Overall, elevated levels of engagement across various types of posts, along with the mostly positive or neutral sentiment observed throughout the comments, suggest that LinkedIn can likely help facilitate a balanced exchange on topics such as AI governance, cybersecurity, and digital transformation, which the account aims at. To fully appreciate these insights, however, several important considerations and limitations should be explored in more detail, which will be closely linked to the respective sub-questions.

5.1 Informative Content: High Interaction or Just High Frequency?

There are distinct engagement patterns among different post categories. Informational posts consistently generated higher interaction scores than action-oriented or interactive content, revealing the importance of sharing detailed, in-depth information with LinkedIn's professional user base. This can be interpreted as a success for the account's strategy. Additionally, this finding can be confirmed with existing literature suggesting that posts with substantive content are more likely to result in thoughtful commentary on LinkedIn than more superficial calls to action like on other platforms (Lai & Fu, 2020; Rauchfleisch et al., 2023).

One possible explanation is that informative content meets LinkedIn's audience's expectations of acquiring knowledge and staying current on emerging digital governance trends. In contrast, action-oriented posts do tend to focus on promoting events or driving immediate participation on other platforms, which may not always result in sustained discourse on LinkedIn itself. Nonetheless, on the same point, an important factor to note is the imbalance within the collected dataset: informational posts far outnumbered action-oriented (greater factor 10), and interactive ones (greater factor 2). As a result, it remains difficult to conclusively state whether their content type alone drove higher engagement.

5.2 Keeping it positive while catching up with expectations

Comparing the LDA results for official posts and user comments further underscores some of the core themes driving professional engagement. On the official side, topics such as "*infrastructure*," "*cybersecurity*," and "*data*" – all closely associated with the European Commission's forward-looking digital strategies – appear strong. The repeated references to "*EU*," "*European*," and "*digitaleu*" confirm that the Commission's communication aligns well with policy goals: the content is directly tied to European digital initiatives and events, highlighting large-scale connectivity, cybersecurity collaboration, and data privacy.

User comments, on the other hand, reveal a slightly broader set of interests, often clustered around "*tech,*" "*AI*" and "*ethics*". While the first two terms align closely with the account's focus, the latter should be considered more often in future posts and could result in more active engagement, representing user interests. The presence of terms in multiple languages, e.g., Polish and Italian, would highlight the account's broad reach and remind users of regional differences across policies.

Sentiment analysis showed that most user responses remained positive or neutral, with relatively few explicitly negative comments. While these findings suggest an overall favorable reception, the neutral sentiments often took the form of information requests, indicating that users were keen to gather more facts before forming strong opinions, which should be considered for future posts. On this note, it stood out that in the results, only five comments out of 596 had been posted by the EUDT account itself over the selected six-month period. This aligns with the overall account focus, which appears to aim at providing news only. However, it shows unused potential for user engagement.

Negative comments mostly referenced matters like equitable access and perceived failings in addressing social or ethical dimensions of digital governance, offering an opportunity for policymakers to address these concerns in more detail. Notably, the standard sentiment analysis tool used here cannot reliably detect sarcasm or irony, which may hold back subtler criticisms or discontent. Therefore, the largely optimistic tone in the data must be interpreted cautiously – although checked manually – acknowledging potential shortcomings that simple polarity classification might not capture.

5.3 Optimizing LinkedIn Use for Governance

LinkedIn's professional user base appears drawn to thorough, information-focused content, but there remains unexplored room for experimenting with features that can further stimulate engagement. Although, as stated on the account itself, *"[w]e bring you the latest news"* (European Commission, 2024b), it seems the EUDT strategy focuses on conveying information only; elements within their posts actively channel discussions with open-ended questions. It can be inferred that the overall strategic approach should be streamlined. Once that has been completed, encouraging more interactive elements, such as polls or structured Q&A sessions, could offer valuable insights into stakeholder concerns and attract more sustained discussions. Similarly, leveraging document-sharing options might help deliver detailed policy reports or guidelines while simultaneously inviting comments from academics, industry representatives, and policy experts.

Moderation guidelines encouraging the EU Digital & Tech team to respond directly to user queries or questions could help bridge the gap between policy announcements and community feedback. By explicitly inviting subject matter experts or other stakeholders to engage in LinkedIn Live events, for instance, the account could generate a more interactive culture reflecting DPG's emphasis on inclusivity and modern-times responsiveness.

The thematic consistency in user comments, centered on AI, ethics, data governance, and cybersecurity, suggests that messaging focused on these areas resonates strongly. By blending substantive updates with open-ended conversation prompts, the EU Digital & Tech account could refine its strategy for reaching a broader, diverse audience. Ultimately, optimizing LinkedIn as a platform for digital governance should extend beyond increasing engagement metrics. It must also reflect fundamental public values, including transparency, inclusivity, and accessibility. This applies not only to the substance of the content but also to the modes of communication. Ensuring that materials are accessible, inviting participation from diverse user groups, and encouraging open, dialogic interaction across sectors and regions are essential steps toward aligning communication practices with the broader objectives of DPG.

6 Conclusion

This study presents a compelling case that LinkedIn can act as a relevant – although in this case underutilized – tool for communication in digital public governance. It is important to note that focusing on the EU Digital & Tech account does provide an in-depth view of one influential channel but cannot fully capture the diversity of communication approaches across other public sector accounts or national government profiles. While different content strategies result in varying degrees of engagement, the main trends suggest that the user base is indeed willing to engage thoughtfully with policy-related content on this platform, which might be useful for all parties involved. These themes resonate with core values of transparency, accountability, and innovation, signaling that the account's existing content strategy already addresses some fundamental principles of modern digital governance.

Looking ahead, a more comprehensive and improved participatory governance approach on LinkedIn would involve experimenting with additional media formats, such as short videos, infographics, real-time webinars, etc. While the account shows promise in posting regular, informative updates, more interactive strategies could help activate participation and make communication more dialogic. Through such strategies, followers can evolve into active prosumers, directly contributing to content creation and policy dialogue. This includes actively responding to user comments, conducting regular LinkedIn polls on current regulatory questions, using pinned posts to invite stakeholder feedback, or organizing periodic LinkedIn Live sessions with European Commission representatives or digital experts. These approaches are relatively low-cost and can stimulate recurring engagement across a more dynamic communication environment.

To then assess the impact of such measures, LinkedIn's built-in analytics tools (e.g., comment sentiment, viewer retention, and demographic breakdowns) could be systematically used. Metrics like comment-to-like ratios, average poll participation, or reply to rates to open questions could serve as benchmarks for interaction quality over time. These evaluation practices would allow communication teams behind such accounts to adjust their strategies iteratively and tailor them to different stakeholder groups, aligning digital governance communication with ongoing expectations of transparency, responsiveness, and user engagement.

Such strategies align directly with core DPG values – transparency, accessibility, and collaborative decision-making – thus positioning LinkedIn not merely as a news distribution tool but as a dynamic platform enabling followers to become prosumers actively participating in policy co-creation and shared innovation across the EU.

Future research might explore whether a more balanced content strategy – combining informational depth with invitations for audience participation – would result in different engagement patterns or emotional responses, particularly among different demographic segments. Moreover, comparing the engagement dynamics of the EUDT account with those of the broader European Commission may clarify whether observed trends are specific to stakeholders actively seeking updates on digital policy or whether they reflect more general patterns across the institution's social media landscape. Additionally, future research might apply the legitimacy framework introduced by Özdemir et al. (2025) to evaluate which types of institutional communication contribute most effectively to different dimensions of public legitimacy in digital governance contexts.

6.1 Limitations

This study found that LinkedIn might be an effective communication channel for DPG, yet various limitations shape the extent to which the findings can be generalized. First, focusing on the EU Digital & Tech account as a single channel reduces representativeness, as different organizations or agencies might have contrasting objectives, audiences, and communication styles.

Selection bias is another concern, as this study analyzed only the posts and comments that remained publicly visible during data extraction. Certain user contributions might have been deleted, flagged, or set to restricted visibility, potentially distorting the larger conversation around the topics. The reliance on automated data extraction tools, too, introduces possible inaccuracies if LinkedIn's interface changes or if connectivity issues interrupt the data collection process, which cannot be fully declined. Moreover, repeated mentions (of other people's names or tags) and replies can lead to partially duplicated entries. Even though the account and its contents are publicly accessible to all users, individual names and other personal information have been removed to comply with the EU's GDPR, addressing ethical concerns about data handling and privacy.

Language diversity further complicates sentiment and topic analyses since the chosen methodologies rely heavily on English-centric tools that do not always account for slang or other languages, e.g., Polish and Italian, as seen in the data set. Reliably including this data in future studies will account for a more inclusive approach, as this limitation causes multilingual users' sentiments or nuanced criticisms to go undetected.

Finally, the automated sentiment detection (TextBlob) cannot easily interpret sarcasm or subtle humor, possibly categorizing a critical comment's tone as neutral or positive. This limitation was, to an extent, addressed through manual spot reviews of selected comments. Expanding the analysis to multiple LinkedIn accounts, refining sentiment-detection methods and tools, systematically incorporating manual reviews as well as integrating machine learning tools with contextual understanding could employ richer and more precise insights.

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Data/Software Access Statement: All GDPR-compliant data used in the study can be found at https://github.com/socialmatchbox/LinkedInovation/.

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