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Communication Strategies in Horizon 2020 Research Projects

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Abstract

Effective communication of complex scientific research is crucial for Horizon 2020 (H2020) projects, especially given the diverse audiences they must reach. This paper examines the strategies, challenges, and best practices for communicating H2020 project findings, with a particular focus on making technical information accessible to non-specialist audiences and emphasizing qualitative impacts.

Using case studies from projects like CHARMING, COSMIC, REDMUD, SULTAN, B5GMINTS, NEW-MINE, SOCRATES and DEMETER, this study demonstrates how interactive tools, digital platforms, and targeted engagement with policymakers and industry enhance public understanding and support for EU-funded research.

Keywords: Horizon 2020; EU Research Communication; Public Engagement; Scientific Communication; Non-specialist Audiences; Complex Information

1. Introduction

- **Context and Importance:** Horizon 2020 is the European Union's flagship program for research and innovation. Effective communication within H2020 projects is essential for building public trust, enhancing science literacy, and aligning research outputs with societal needs. The European Commission emphasizes that communication activities should inform and engage citizens and stakeholders, demonstrating the impact and benefits of EU-funded research. (European Commission, n.d.).
- **Challenges in Communicating H2020 Projects:** Communicating complex H2020 research findings requires balancing clarity and technical detail to engage diverse audiences, including non-specialists, industry stakeholders, and policymakers. One significant challenge is avoiding excessive jargon, which can hinder understanding among non-expert audiences. Projects like CHARMING and COSMIC have demonstrated innovative solutions, such as interactive learning tools and tailored outreach strategies, to overcome these challenges. The European Commission emphasizes the need for strategies that use accessible language and multi-channel outreach to connect with broader audiences (European Commission, n.d.).
- **Objectives and Research Questions:** This paper explores effective communication strategies in H2020 projects, focusing on how complex scientific information can be simplified and disseminated to non-specialists. Key research questions include: "What methods are most effective for making H2020 research accessible?" and "How do H2020 communication strategies enhance public support for EU research?"

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2. Literature Review

- **Overview of Communication in Research Projects:** Public communication in H2020 aligns with EU policies that prioritize transparency and societal impact. The H2020 Communication Guidelines emphasize the use of plain language, visuals, and digital tools to make research accessible (European Commission, n.d.).

2.1. Case Studies in Effective Communication

- **CHARMING:** Utilized immersive learning tools, such as VR and AR, to create engaging educational experiences for chemical engineering students. [8] The CHARMING project developed the Game Editor for Learning (G.E.L.), an interactive platform that enabled collaborative creation of educational games. This tool facilitated active learning and increased engagement among students (CHARMING Project, n.d.).
- **Challenges of Communicating Complex Scientific Information:** Effectively simplifying scientific information is a key challenge for H2020 projects. Case studies from projects like CHARMING and COSMIC highlight how visual tools, such as virtual reality (VR) and augmented reality (AR), can help make technical content accessible. The CHARMING project, for example, engaged over 10,000 unique visitors on its website. (CHARMING Project, n.d.).
- **Recognition as a Measure of Communication Success:** Public recognition and awards serve as qualitative indicators of successful communication. REDMUD and NEW-MINE have been highlighted in policy discussions and industry forums, underscoring the influence of effective communication on policy engagement and stakeholder support.

3. Methodology

- **Research Design:** This paper employs a qualitative design, analysing communication plans, website engagement metrics, and feedback from case studies in H2020 projects. To provide a comprehensive analysis, this study adopts a mixed-methods approach. Quantitative data, such as website traffic statistics, social media engagement rates, and attendance figures from public events, are collected to measure the reach and impact of communication strategies. [1] Qualitative insights are gathered through interviews with project communication officers and content analysis of outreach materials to understand the effectiveness of various communication approaches.
- **Data Collection Methods:** Data includes H2020 project websites, published guidelines, and open access project-specific reports on public engagement.
- **Sample and Sampling Methodology:** Projects like CHARMING, SULTAN, DEMETER, and COSMIC were chosen due to their use of interactive and digital engagement strategies.
- **Data Analysis Methods:** Thematic analysis was conducted on the communication approaches used by each project, focusing on methods to simplify complex information.
- **Limitations:** This study is based on publicly available data and does not include direct audience feedback. Relying solely on publicly available data may not fully capture the nuances of audience engagement. Future research should incorporate direct feedback from target audiences to assess the effectiveness of communication strategies more accurately.

4. Results

- **Effective Communication Strategies:** H2020 projects have utilized multi-channel strategies to engage diverse audiences. For instance, CHARMING engaged with over 10,000 website visitors in total and reached 2,000 social media followers, illustrating its broad outreach and engagement capabilities.

4.1. Innovative Tools and Techniques

- **CHARMING:** The project developed interactive tools, such as the Game Editor for Learning (G.E.L.), which facilitated collaborative educational activities. This innovative approach not only enhanced user engagement but also promoted active learning among participants.

4.2. Recognition and Awards

- **DEMETER:** The project's promotional video received an award at the European Commission's Joint Research Centre (JRC) event, underscoring the significance of multimedia in effective science communication (DEMETER Project, n.d.).
- **COSMIC:** Recognized as a best practice in communication by the European Commission during a public event, COSMIC exemplifies effective strategies in communicating project outcomes (COSMIC Project, n.d.).
- **Engagement Metrics and Recognition:** The REDMUD and NEW-MINE projects specifically targeted policymakers and industry professionals through tailored briefings, which resulted in citations within relevant policy documents. Engagement metrics, including website visits, workshop attendance, and conference presentations, serve as indicators of each project's reach and impact, demonstrating their effectiveness in influencing stakeholders and contributing to policy discourse.

In response to the increasing prevalence of online meetings, the traditional platforms such as Zoom, Microsoft Teams, and Skype have been supplemented by alternative virtual environments for internal communication. Notably, progress meetings involving the entire consortium and representatives from the European Commission were conducted online utilizing innovative platforms such as VirBELA (<https://www.virbela.com/>) and Gather Town (<https://www.gather.town/>). These platforms facilitated a more immersive and interactive experience, fostering engagement and collaboration among participants.

In the context of newsletters and email campaigns, SendGrid (<https://sendgrid.com/en-us>) was initially used due to its cost-effectiveness. However, Mailchimp emerged as a more favourable option owing to its user-friendly interface and enhanced functionality.

Additionally, Zapier (<https://zapier.com/>) played a crucial role in automating various tasks, particularly in facilitating the posting of multiple articles on the website, thereby streamlining workflow and improving efficiency.

A series of videos about the projects were made. Although Vimeo was chosen for its lack of ads, YouTube garnered significantly more views.

In terms of social media channels, LinkedIn proved to be the most effective platform, while Twitter and Facebook had limited impact.

All ETN projects, CHARMING, COSMIC, REDMUD, SULTAN, B5GMINTS, NEW-MINE, SOCRATES and DEMETER, organized summer schools to train early-stage researchers.

5. Discussion

- **Interpretation of Findings:** The case studies confirm that communication strategies combining digital tools, visual aids, and audience-specific language are highly effective in public engagement. Projects that leverage social media, interactive platforms, and VR/AR experiences enhance public understanding and support.
- **Implications for H2020 Communication:** Prioritizing interactive and visual tools enhances transparency and builds trust among non-specialist audiences. Recognition through awards and participation in public events further validates the effectiveness of communication strategies

6. Conclusion

Summary of Key Findings

Multi-channel strategies that simplify complex content are essential for engaging non-specialist audiences in H2020 projects. Awards and policy mentions indicate that successful communication enhances public impact and institutional support.

Final Thoughts

In the context of Horizon 2020, effective communication is not merely a project requirement but a crucial element in building public understanding and support for scientific research. By tailoring communication strategies to address the complexity of scientific information in accessible formats, H2020 projects can strengthen the public's connection to research and the EU's commitment to transparency. Future research on the effectiveness of different communication

approaches will be vital for refining best practices in public engagement and increasing the societal impact of EU-funded research

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