

HOW CAN DIGITAL MEDIA BE USED AS TOOLS FOR ARCHITECTURE OFFICES?

Antti Ahlava, Fernando Nieto



How can digital media be used as tools for architecture offices:

Social media and video for sustainable architecture

Antti Ahlava & Fernando Nieto

Introduction

This article describes first the context for marketing green architecture through social media and videos. Even though most of traffic in the internet and social media is now video, video marketing might seem to many architects as something that is not relevant, because they are in a professional industry, but this is misleading if the architecture offices would like to connect with users, promote their past work and abilities, better their reputation, make people aware of their identity, open their activities to new audiences and connect to them personally. Moreover, video is a practical tool for conveying architecture, because architecture is that type of a field of art, where the experience is created through movement in space.

Web- and app-based architectural media platforms such as ArchDaily and Dezeen are social media in the extent that they can create a community and interaction between designers and their audiences. Many architecture offices use social media platforms to share project updates, talk about design processes, and give behind-the-scenes glimpses. Video content, including project walkthroughs, time-lapse videos, and interviews with architects, have become a way to communicate key aspects of architectural projects.

While video, social media, and mobile content transform also green marketing, the challenge for architects interested in sustainability is to choose the right marketing strategy and execute it well, including developing a strategy based on research, implementing multiple streams of traffic to one's website, acquiring subscribers and fans, converting subscribers to customers and change makers with an effective marketing process, as well as evaluating, and optimising their marketing through social media and video.

Part of sustainable development – collaborative and participatory methods in architecture and design – have been a popular topic in design methodologies during recent decades, but little has been researched about how social media and video can be used for the interaction between architects, project participants and users in co-design and co-creation. Because people often buy green products for the fun and feeling of wellbeing that comes with the purchase, it is likely that representations of green architecture should also share this pleasurable feeling. Because least liked YouTube videos on sustainable design are recordings on lectures, while as students and professionals share an affinity to videos on projects, educational and informative content should therefore include insights into the design process, architectural trends, or tips for clients.

The research questions are: 1) How could architecture offices better use short videos and social media for their activities? 2) How to evaluate videos on architecture? 3) How to evaluate social media for architects?

The hypotheses are: 1) When making architecture videos promoting sustainable architectural projects that could be used in social media, even though there is a lot of research material on using social media and video for advancing sustainability, sustainability and architecture in itself are not enough to create compelling videos, but making skilful videos require also generic understanding of compelling moving images and storytelling. 2) Good architecture videos often exhibit clear communication of design concepts, attention to visual quality, and a well-structured narrative. They should effectively convey the architect's vision, providing insights into the design process. On the other hand, bad architecture videos may lack clarity, have poor visual quality, and fail to articulate the design rationale. 3) When assessing social media for architects, the following criteria seem relevant:

- Selection of the platform: Consider whether the architect is using right social media platforms for their target audience. Different platforms cater to separate demographics and purposes.
- Cohesion: Ensure that the content aligns with the architect's brand identity and the sustainable narrative, including consistent use of visuals, colours, and messaging.

- Expressing signs of networking and collaboration with other professionals. Collaborative efforts can expand reach and credibility.
- How is the feedback? If available, consider viewer comments, likes, and shares. Positive engagement can indicate the video's effectiveness in capturing audience's interest.

The case study in this research was the evaluation of videos on sustainable architecture projects made by architecture students from Aalto University (AU) and Tampere University (TAU), as well as the presence of the AU projects in social media. Scrutinising videos and their performance in social media produced insight that helps to modify and clarify the criteria for green video and social media content for architects. The AU project in question was the urban renewal design of Ethelburga Estate in Battersea, London, accomplished by students in the Department of Architecture at Aalto University, in autumn 2023. Eight students were asked to plan how to improve the sustainability of the area by urban regeneration and qualitative evolutionary design. The TAU project, carried out by students and teachers from the School of Architecture at the Tampere University's Faculty of Built Environment during the spring semester 2024, consisted of the design of a public building with cultural use for the district of Ratina in the city of Tampere.

Based on these two samples of student videos, it seems that for the present younger generation of designers, it is typical to use the rhetoric of doom and threat to precondition their message and ideas. These student works clearly show how dependent the video medium is on the methods and techniques of moving images. A large variety of such techniques should be used for effective reception, including graphic and diagrammatic animation, recordings of actual people and places, as well as architectural animation, to captivate the viewer and communicate clearly and attractively. The directness of social media must be considered and can be implemented for example by including the architect's voiceover, and interview in the video. A documentary, spontaneous and discursive style is more suitable to social media than polished strategy statements and slogans.

1 State of the Art

Langley and van den Broek (2010) elaborate how social media can overcome two barriers for sustainability: fatalism and busyness. Namely, videos and other posts in social media very often become captivating and optimistic promotions for sustainable design and watching a video on sustainable architecture is a fast way to absorb information and experiences on green architecture. There has been a noticeable trend not only everywhere else, but also in the architecture industry to social media and video for promotion and communication on one's own ideas. Even though most of traffic in the internet and social media is now video (Lund-Brown, 2022), video marketing might seem to many architects as something that is not relevant, because they are in a professional industry, but this is misleading if the architecture offices would like to connect with users, promote their past work and abilities, better their reputation, make people aware of their identity, open their activities to new audiences and connect to them personally.

Architecture is that type of art, where the experience is created through movement in space. Therefore, in addition to actual presence in architectural sites and spaces, video is a practical tool for conveying architecture. Because of the ubiquitous digitalisation, video cameras embedded in mobile phones and easily available and affordable editing software, there are no drastic barriers for architects making videos about their work. Millions of people publish their own videos in social media without meticulous education. Using videos for informing people about architecture is especially easy now when social media offers a practical forum for distributing them. Video and social media can effortlessly be used by architects also for talking about the possible sustainable characteristics of their work. These green particularities may include e.g., eco-friendly practices, as well as measures for energy efficiency, and diminished carbon dioxide emissions.

Simultaneously, web- and app-based media platforms have emerged for architects and designers, including Architizer, Archilovers, ArchDaily, Dezeen, Archinect and World Architecture (WA). These are social media in the extent that they can create a community and interaction between designers and their audiences. Of these architectural social media, Architizer has a section in their platform for architecture videos, but it does not publish

user comments to its content. Archlovers calls itself a network for architects and it really is a social medium in the sense that its users can post likings and comments on its published projects and blogs. ArchDaily considers itself a broadcaster, but its contents include the conversation function as well as links to numerous generic social media. These functions are also included in Dezeen, whose project-specific discussion sections are very lively. Archinect publishes news-specific discussion chapters on projects as well as includes a more general conversation forum strengthening its community, but its video content is sparse. WA displays interviews on architects, but its platform is not interactive, as per at the beginning of year 2024. The real social media dedicated for architecture are thus such as ArchDaily and Dezeen.

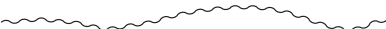
A selected medium is part of the message from a publishing architect because it favours specific practices and emphasis on architecture in its content. Amongst more generic social media, Instagram seems to typically contribute to communicating on public space and TikTok on interior trends (Carter, 2021). Though TikTok and Instagram Reels (as well as Facebook Stories, WeChat, LinkedIn videos and Pinterest video pins) are some of the fastest-growing social media features (Kemp, 2023). They are very much focused on “short form” video content. With a subject as complex as architecture, these may not allow the length and depth in telling about the complexities of what architects do and the environments of constraints and competing interests. If architects are interested in producing lengthier videos, they may want to consider YouTube.

Some architecture offices use social media platforms to share project updates, thoughts, design processes, and behind-the-scenes glimpses. Video content, including project walkthroughs, time-lapse videos, and interviews with architects, has become a way to communicate aspects of architectural projects. Social media platforms and architecture videos published on them serve as practical devices for architects to have an online presence, connect with a broader audience, and display their project portfolio. As the importance of online visibility and digital marketing have continued to grow, it is likely that more architecture offices will incorporate social media and video into their communication and marketing strategies to reach and engage with clients, collaborators, and the wider community. Regarding especially sustainable architecture, Williams et al. (2014) scrutinise how new social media channels are smart alternatives to traditional and overly simplified news channels to inform the interested public on the complex nature of sustainability before greenwashing has a chance to create cynicism and disengagement with the topic. This is one reason why there are benefits for architecture offices to use social media for their green initiatives.

Marketing in architecture is specific due to the unique nature of architectural services compared to tangible products. Architecture involves complex, intangible designs and experiences. The marketing of architecture relies therefore heavily on visual communication to convey design concepts, aesthetics, and the experiential aspects of a space. Architectural marketing is often based on differentiation: how this architect’s work is different to others. Therefore, this emphasises often a firm’s unique and differentiating brand identity and positioning relying cohesively on past projects to demonstrate expertise, style, and capabilities.

Building trust is crucial in a business and economy such as architecture, which involves considerable investments, and here social media and video prove to be practical for trustworthiness and client relationships because architects can leverage client testimonials, case studies, and references to establish credibility. Effective marketing in architecture involves transparently communicating the design process, from concept to completion, to potential clients and strategic partnerships with marketing professionals may help architects (Haupt & Kubitzka, 2002). Understanding these particularities helps architects tailor their marketing strategies to effectively communicate the unique value proposition of their services. In generic social media, influencer marketing has become popular lately and architects might become interested as well in networking with them to widen their audiences and fortify their communities.

When developing social media for architects, one can naturally assess postings on aesthetic basis on quality of content shared. High-resolution images, engaging captions, and informative descriptions enhance the overall



appeal of an architect's social media presence. LeCompte (2010) emphasises the usefulness of being transparent and communicate openly and regularly with one's audience about actual topics instead of marketing messages. Audience engagement and consistency can be examined by monitoring the level of engagement through likes, comments, and shares as in any social media. Regular updates can keep the audience engaged and demonstrate an active online presence. However, compared to traditional media, it is crucial to understand that the individual consumer is in charge on social media. For example, comments criticising or ridiculing content in social media may prompt changes even on planetary scale (Howell, 2009; Vranica, 2012). Because social media is a discourse, it makes sense to concentrate on organic content, and build a marketing or news campaign little by little and to encourage dialogue and participation by using such techniques as a contest or incentive (Matthews, 2011d). 28% of bloggers post opinions on products and brands and building a community of brand enthusiasts and even evangelists requires that one knows own brand identity (LeCompte, 2010). Widge (2012) suggests identifying micro-segments through research and target these specific niche markets, e.g., by targeting new visitors and influencers.

While video, social media, and mobile content transform also green marketing, the challenge for architects is to choose the right marketing strategy and execute it well. The process for developing masterful green marketing strategy is, according to Hannam (2010) as follows: a) Develop a strategy based on rigorous research b) Implement multiple streams of traffic to your website c) Acquire subscribers and fans d) Convert subscribers to buyers with an effective sales process e) Test, evaluate, and optimise. What makes architectural business difficult in this endeavour is that the number of customers for an average architecture office is much smaller than to, for example, a company operating in retail. Therefore, turning a follower into a customer is not that easy and finding the right target groups and having a quantity of followers there becomes crucial.

YouTube, Facebook, TikTok, and Instagram are now the leading platforms for video in social media (Raj, 2023). Video content has lately increased in social media compared to the proportion of still images (Subhashis, 2023) and it should therefore make sense, for architects looking for interaction and participatory culture with wider audiences, to use video for presenting their work. Quality video should therefore be essential for all green marketing websites. Videos are 53 times more likely than other Web pages to appear on the first page of search results (Elliott, 2009). Therefore, it makes sense for architecture offices to publish videos explaining their sustainable products and services. For example, the architecture office BIG's narrative project presentations such as BiodiverCity (2021) are efficient examples of how architecture videos can include persuasive storylines, clear pictorial diagrams, and fascinating animation to combine technical sustainability with seductive visions for life combining hedonism with sustainability. Videos can be used by architects not only to market their services and show their designs, but also for research: They can use social media to research audience interests and demographics, follow emerging trends and topics, and gather inspiration.

Collaborative and participatory methods in architecture and design have been a popular topic during recent decades, but little has been researched on how social media and moving images can be used for the interaction between architects, project participants and users in co-design and co-creation. In the research of participatory, user-centred and collaborative design issues that have emerged include for example user segmentation and the heterogeneity of users, the complexity of interaction with project stages, the difficulty to attract participants, but also how to manage huge amounts of response, the criteria for high quality processes, as well as the emerged openness of a design process (Hagen & Robertson, 2009; Johnson, 2013; Näkki et al., 2011; Pauline et al., 2011; Reyes & Finken, 2012). Social media can also be used to contact and collaborate between professionals. For example, many architects use social media messaging in a closed circuit such as WhatsApp, WeChat, Line or Telegram for the project management and sharing ideas and sketches within the project group at the initial stages of a project.

Related to the motivation of green transition for people, Wexler (2010) emphasises how people often buy green products for the fun and feeling of wellbeing that comes with the purchase. It is likely that representations of

green architecture should also share this pleasurable feeling. Enhancing a positive vibe and creating a memorable experience can generate a positive buzz around sustainability and the architects working on that. When amplified through social networks, buzz can generate also new projects to the offices and start a movement. Therefore, in green marketing, there exists the need for understanding of which issues are most important to the positive feelings of one's audience. That way, design offices can focus on consumer attractivity relevant to the audience in question (Widger, 2012). In terms of social media, and based on response from industry leaders, marketers should find simple ways to change people's behaviour that appeal to emotions rather than rational logic if they want to succeed in making consumer lifestyles more environmentally friendly (Baker, 2012).

Regarding the vagueness of the term video, and for the purpose to pragmatically think its applications in architecture, it is needed to widen the concept to include all sorts of electronically moving images, including AI-generated videos, as well as virtual and augmented reality – as long as there are moving images displayed by digital representation. In that sense, video is a question of vision technology, and experiences through VR/AR glasses is not video. However, the same VR/AR content can be displayed on a screen. AI generated videos for the moment make possible making videos on imaginary architecture, but connecting these to actual sites and three-dimensional design is not yet possible. Considering the speed of the developing AI techniques, it might well be possible in the future to turn the process of designing architecture upside down and start with AI generated videos and end with design documentation.

Meza & Yamanaka's (2016) research shows that least liked YouTube videos on sustainable design are recordings on lectures, while as students and professionals share an affinity to videos on projects. Educational and informative content should therefore include insights into the design process, architectural trends, or tips for clients. Jeffries (2011) says that highlighting the financial benefits of sustainable living that go to consumers makes more sense than focusing on the benefits that go to the company for its sustainable efforts. Augmented reality models in social media should be useful content for showing architectural spaces.

A growing follower base indicates increasing interest and relevance. While social media provides many new means of acquiring and distributing information, its popularity is also based on facilitating relationships based on mutual interest and mutual gain. These can be leveraged into customer loyalty (Tsai, 2009). Loyalists and supporters can be turned into influencers that motivate their friends (Williams et al., 2014).

Analytics tools can be used to track and analyse social media performance. Data-driven insights can guide future strategies. While posting articles, ads, updates, pictures, and videos on social media can generate traffic, it does not help search engine rankings. Thus, it is important to drive the traffic back to one's website, which does impact search engine rankings (Matthews, 2011). Garcia-Garcia et al. (2016) emphasise the importance of a community manager in connecting an architecture company to their audience.

2 Questions and Hypothesis

Questions

- 1) How could architecture offices better use video and social media for their activities?
- 2) How to evaluate videos on architecture and how to differentiate good and bad architecture videos?
- 3) How to evaluate the uses of social media for architects?

Hypothesis

- 1) When making architecture videos promoting sustainable architectural projects that could be used in social media (such as YouTube), the hypothesis was that even though there is a lot of research material on using social media and video for advancing sustainability, sustainability and architectural documents in itself is not enough to create compelling videos, but making skilful videos require also generic understanding of compelling moving images and storytelling.



Architecture offices can leverage video and social media by creating engaging content like project walkthroughs, design process time-lapses, and behind-the-scenes glimpses. Regularly sharing updates, design philosophies, and client testimonials on platforms like Instagram, YouTube, and LinkedIn can enhance visibility and client engagement. Additionally, hosting live Q&A sessions or webinars can foster a sense of community and highlight the expertise of the architect.

2) Good architecture videos often exhibit clear communication of design concepts, attention to visual quality, and a well-structured narrative. They should effectively convey the architect's vision, providing insights into the design process. On the other hand, bad architecture videos may lack clarity, have poor visual quality, or fail to articulate the design rationale. One can pay attention to the storytelling, visuals, and how well the video communicates the essence of the architectural project. Other evaluation criteria for architecture videos could include:

- Visual clarity, composition, and overall visual appeal.
- Factual clarity: if the video includes technical or practical justification of the architecture, if its representation is accurate, relevant, and clear in explaining complexities natural for architecture.
- Narrativity and engagement: how well the video tells a story or presents information; does the video include attractive, captivating, persuasive, inspirational and convincing material? Does it engage the audience? Capturing content can include creative storytelling, dynamic visuals, and effective use of music or sound. Videos in social media appear typically more spontaneous than film productions and architects could learn from their allure of directness when producing their own videos.
- Communication skills: does the video convey the architect's philosophy, vision and design concepts with clarity?
- Originality and differentiation: social media is a fantastic way to humanise an architecture firm, connect on a personal level, and show the behind-the-scenes of their work.
- We can assess whether a video meets the motivations, wants and interests of its target audience. The content should resonate with the intended viewers including potential clients, peers, or the public.
- Does the video align with the firm's brand and identity? Consistency helps in building a cohesive and recognisable brand identity.

By evaluating these aspects, one should gain a comprehensive understanding of the strengths and weaknesses of architecture videos and helping make informed judgments about their quality and effectiveness.

3) When assessing the use of social media for architects, the following criteria seem relevant:

- Selection of the platform: consider whether the architect is using right social media platforms for their target audience. Different platforms cater to separate demographics and purposes.
- Cohesion: ensure that the content aligns with the architect's brand identity, including consistent use of visuals, colours, and messaging.
- Check for signs of networking and collaboration with other professionals. Collaborative efforts can expand reach and credibility.
- How is the feedback? If available, consider viewer comments, likes, and shares. Positive engagement can indicate the video's effectiveness in capturing audience's interest.

3 Case studies

The case study in this research was the evaluation of videos on sustainable architecture projects made by architecture students and their displays in social media. Scrutinising videos and their performance in social media produced insight that helped modify and clarify the criteria for green video and social media content for architects.

The first project in question was the urban renewal design of Ethelburga Estate in Battersea, London, accomplished by students in the Department of Architecture at Aalto University, in autumn 2023. Eight students were asked to plan how to improve the sustainability of the area by urban regeneration and qualitative evolutionary design.

The student works clearly show how dependent the video medium is on the methods and techniques of moving images. Editing, animation, voiceover narration, music, speed, and rhythm all have high importance in the appeal, narrativity, communication and engagement. Synchronisation and dramaturgy of sound and moving image was lacking. Regarding originality, it matters if a voiceover is AI-generated or original by the author. It would have been fitting for the directness of the medium to see the author. This would have also been pragmatic for the display of videos in social media. Animated drawings proved to be very suitable for captivating videos, while as still images if text was not that attractive as part of a video. Because the videos were made by students and not by architectural firms, it was not possible to analyse the integrity and continuance of brand identity.

The student works also show how different orientation there is in showing architecture projects in video format than just producing image and text. On the other hand, the videos prove that in addition to the normative architectural projections and perspective images, these can add new layers of attraction and meaning to the project presentations. Videos are better means for telling how the architect arrived in the result and why, than traditional representation.

The second project consisted of the design of cultural facilities in the form of a new public building including a library and media centre for the district of Ratina in Tampere. The new premises were meant to substitute a parking lot within an industrial area located between a commercial centre and the Höyrypeusto park and Pyhäjärvi lake to the south of the city centre. The functional programme included a library with media and multipurpose rooms, exhibition and gallery spaces, studios for artists and musicians, a restaurant-cafeteria, a small auditorium and area for administration and services. The project was carried out in pairs by 4th year students from the Master in Sustainable Architecture at the Tampere University's Faculty of Built Environment, School of Architecture, during the spring semester of 2024.

The purpose of the video assignment was to produce audiovisual material that supported the storytelling of the projects' ideas in addition to the traditional ways of communicating projects among architecture students through traditional drawings and visualisations. The video could portray the development of the project's main ideas or present its main architectural characteristics with a duration of approximately one minute. The communication of the project ideas and their development in video format entails the creation of own narratives by students to transmit the qualities and strengths of their projects in the most adequate manner. The videos should create a visual argument to justify why the projects suit the location and requested functions in the best possible way. They can work as a lure for the viewers to gain interest, invite them to look deeper into the other project material and help them to better understand the project merits.

The task outcomes have been rather heterogeneous and substantial in general, despite students are not typically familiar with video production. The focus of the videos has mainly been placed in showing the projects in their final state, although some videos depict partly the design process too. Most videos show a continuing walkthrough within and outside the building and its surroundings consisting of a visual tour at aerial or user level through a previously built 3D architectural model. Those itineraries are accompanied by either music or the narration of the project characteristics by its authors or sometimes through an AI-generated voiceover. Other videos depict a succession of more or less animated project snapshots that include drawings, sketches, diagrams or renderings. Some videos include the use of indoor and outdoor ambient noise, which gives a sense of reality to the project animations. Some videos experiment with hand-drawn live moodboards or sequences of paper sheets that are changed by hand to construct the narrative. The use of subtitles is generally a useful tool to make the videos more accessible.

The student work produced in collaboration between Aalto University and The Royal College of Art was published in social media and on the internet, by both university communications (Aalto ARTS) and the publishing channels of the academic groups in question, Group X at the Department of Architecture in Aalto

University, and Intelligent Mobility Design Centre (IMDC) in RCA. As usual for contemporary communication, the material was cross-referenced between different social media platforms and web pages. These platforms included Instagram, YouTube, LinkedIn and Facebook. The work was also offered to Dezeen and ArchDaily both in project presentation and article format but without success. Takeouts from this experiment was that 1) the same works seem to get most views and likings in different platforms. What is common to these is the large variety of different techniques of moving images used, including especially documentary video. Those project presentations, which included slide presentation type material in a static form, were not that popular. 2) These publications also realised a typical risk associated with interactive social media: the possibility that some of the responses and comments are not positive, which actually took place. The reason this work was not attractive to the architectural social media Dezeen and ArchDaily can only be guessed, but one explanation might be that these platforms mostly publish content by professional businesses and not universities of students.

4 Conclusions

It is not technically difficult for architecture offices to use video and social media for promoting their sustainable activities and enhance discussion on sustainability. There are many suitable existing powerful social media platforms, as well as especially architectural social media. Video format supports gaining a more visible presence and stronger impact, but engaging to this requires not only architectural material, but also skills in dramaturgy and filmmaking. A large variety of techniques for moving images should be used, including graphic and diagrammatic animation, recordings of actual people and places, as well as architectural animation, to captivate the viewer and communicate clearly and attractively. An adequate use of the narrative rhythm through the speed control of walkthroughs and image sequences, a balance between written text and oral explanations in conjunction with the visual tours and static visualisations, as well as the use of before and after situations of the intervention sites are effective strategies in the utilisation of videos for architectural communication. The directness of social media must be considered and can be implemented for example by including the architect's voiceover, and interview in the video.

Based on this sample of student videos, it seems that for the present younger generation designers, it is typical to use rhetorics of doom and threat to precondition their message and ideas. They tend to present their creations as a cure to prevent to planetary destruction. This reminds of blackmail than the persuasive style of Bjarke Ingels when he says that the designs of his office BIG contribute to hedonistic sustainability.

A documentary, spontaneous and discursive style is more suitable to social media in architecture than polished strategy statements and slogans. One important factor to be considered by architecture offices is the broad scope of different target groups – be they present or future clients, office collaborators or project users – that architectural videos reach in social media, in terms of language use or narrative style.

Bibliography

Baker, R. (2012). Simple and emotive the way to trigger green behaviour. Marketing Week, May 3.

BIG, Bjarke Ingels Group (2021). Biodiversity. A video retrieved on the 4th of February, 2024, from <https://youtu.be/rgaH0rNUsDM?feature=shared>.

Carter, D. (2021). How Social Media Influences Latest Trends in Architecture? Bizopp Media. Retrieved February 2, 2024 from <https://bizopp.media/article/social-media-influences-trends-architecture/>.

Elliott, N. (2009). The Easiest Way to a First-Page Ranking on Google. Forrester. Retrieved on the 4th of February 2024, from https://www.forrester.com/blogs/09-01-08-the_easiest_way_to_a_first_page_ranking_on_google/.

García-García, Carlos, Francisco Felip Miralles, and Marta Royo González. "Social media use as global positioning strategy for architecture studios." *EGE Revista de Expresión Gráfica en la Edificación* 9 (2016): 124-132.

Hagen, P., Robertson, T. (2009). Dissolving boundaries: social technologies and participation in design. *Proc. CHISIG*. Melbourne, Australia, 2009, 129-136.

Hannam, P. (2010). The big 3: How social media, video, and mobile are transforming green marketing. *TriplePundit.com*, June 10. Retrieved April 26, 2013, from <http://www.triplepundit.com/2010/06/how-social-media-video-and-mobile-are-transforming-green-marketing/>.

Haupt, E. & Kubitzka, M., eds. (2002). *Marketing and Communication for Architects*. Birkhäuser.

Howell, P. (2009). The 12 faces of social media for sustainable green marketing. *parkhowell.com*, April 14. Retrieved on the 4th of February 2024, from http://www.na-businesspress.com/Subscriptions/JSIS/JSIS_9_1_2_Master.pdf

Jeffries, E. (2011). Sustainability: The search for a clearer footprint. *Campaign*, October 21.

Johnson, M. (2013). *How Social Media Changes User-Centred Design: Cumulative and Strategic User Involvement with Respect to Developer–User Social Distance*. Doctoral Thesis at Aalto University School of Science.

Kemp, S. (2023). Digital 2023 Deep-Dive: Trends in On-Line Video Preferences. *Datareportal*. Retrieved on the 4th of February, 2024 from https://datareportal.com/reports/digital-2023-deep-dive-trends-in-online-video-preferences?utm_source=Global_Digital_Reports&utm_medium=Partner_Article&utm_campaign=Digital_2023.

Langley, David, and Tijs van den Broek. "Exploring social media as a driver of sustainable behaviour: case analysis and policy implications." *Internet politics and policy conference*. 2010.

LeCompte, C. (2010). How to use social media for green marketing. *Revolutionary Grammar*, March 14. Retrieved April 26, 2013, from <http://revolutionarygrammar.com/2010/03/14/how-to-use-social-media-for-green-marketing/>.

Lund-Brown, S. (2022). *Architecture or Design Firm's Followers on TikTok, YouTube & Facebook*. *Smith.ai*. Retrieved on February 2, 2024 from <https://smith.ai/blog/10-video-marketers-to-learn-from-to-grow-your-architecture-or-design-firms-followers-on-tiktok-youtube-facebook>.

Matthews, R. (2011). Social media marketing and environmental sustainability. *The Green Market Oracle*, February 28. Retrieved on the 4th of February, 2024 from <https://changeoracle.com/2011/02/28/social-media-marketing-and/>.

Meza, V., – Yamanaka, T. (2016). "Sustainable Design in Video Social Networks." *Tsukuba Global Science Week 2016 Art & Design Session Proceedings* (2016).

Näkki, P., Bäck, A., Ropponen, T., Kronqvist, J., Hintikka, K., Harju, A., Pöyhtäri, R., Kola, P. (2011). Social media for citizen participation. VTT publications 755.

Paulini, M., Murty, P., Maher, M. L. (2011). Understanding collective design communication in open innovation communities. *Journal of CoCreation in Design and Arts*.

Raj (2023). All You Need to Know: Social Media Video Platforms. Truelist. Retrieved on the 3rd of February, 2024, from <https://truelist.co/blog/social-media-video-platforms/>.

Reyes, LFM, Finken, S. (2012). Social media as a platform for participatory design. PDC '12: Proceedings of the 12th Participatory Design Conference: Exploratory Papers, Workshop Descriptions, Industry Cases - Volume 2, August 2012, 89–92.

Subhashis, J (2023). 50+ important social media video statistics to know. Sprinkl. Retrieved on the 3rd of February, 2023, from <https://www.sprinkl.com/blog/social-media-video-statistics/>.

Tsai, J. (2009). Marketing and social media: Everyone's social (already). *Customer Relationship Management*, 13(6), 34-38.

Vranica, S. (2012). Media: Tweets spawn ad campaigns - Chatter on social-media sites gives marketers direction for commercials. *The Wall Street Journal*, Eastern ed., October 22, B.5.

Wexler, E. (2010). SunChips grows a greener brand. *Strategy*, May 1.

Widger, D. (2012). What green businesses can learn from Obama's campaign. *Greenbiz*, December 14. Retrieved February 1, 2024, from <https://www.greenbiz.com/article/what-green-businesses-can-learn-obamas-campaign>.

Williams, KC., Robert AP, and Alfred RP (2014). "Green Sustainability and New Social Media." *Journal of Strategic Innovation & Sustainability* 9 (2014).

