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MODERN CHALLENGES IN BUSINESSES WITHIN THE SCOPE OF DIGITAL TRANSFORMATION

СОВРЕМЕННЫЕ ВЫЗОВЫ ДЛЯ БИЗНЕСА В РАМКАХ ЦИФРОВОЙ ТРАНСФОРМАЦИИ

Digital transformation is continuing to give a new form to industries, altering the way we work, interact, and consume. This paper examines three key areas of this transformation: new modes of working, the Internet of Things (IoT), and influencer marketing, exploring both their potential and the challenges they bear. We analyze the evolving work landscape, considering the benefits and drawbacks of remote work and the gig economy. We also explore IoT's transformative power through its revolutionizing urban transportation within the channel of micromobility solutions, while addressing crucial economic and societal concerns. Finally, we discuss the increasing acceptance of influencer marketing, focusing on its effectiveness, advantages and touching on the challenges of authenticity. By examining these interconnected areas, this paper aims to identify key trends, potential pitfalls, and strategies for navigating this complex digital landscape.

Keywords: digital transformation, Internet of things, influencer marketing, micro mobile solutions.

Цифровая трансформация продолжает придавать новую форму отраслям, изменяя то, как мы работаем, взаимодействуем и потребляем. В данной статье рассматриваются три ключевые области этой трансформации: новые способы работы, Интернет вещей (IoT) и маркетинг влияния, исследуются как их потенциал, так и проблемы, с которыми они связаны. Проанализирован меняющийся ландшафт работы, рассматривая преимущества и недостатки удалённой работы и экономики. Автор также исследует его преобразующую силу, революционизируя городской транспорт в рамках микромобильных решений и решая при этом важнейшие экономические и социальные проблемы. Автор также обсуждает растущее признание маркетинга влияния, сосредоточив внимание на его эффективности, преимуществах и проблемах аутентичности. Исследуя эти взаимосвязанные области, автор выявляет ключевые тенденции, потенциальные ловушки и стратегии для навигации в этом сложном цифровом ландшафте.

Ключевые слова: цифровая трансформация, интернет вещей, маркетинг влияния, микромобильные решения.

Introduction

Digital Transformation(DX) is the idea of integrating disruptive technologies into everyday life to reach better productivity, better value and overall increased welfare. To support their long-term policies, more and more countries, business associations, and international organizations are creating strategic foresight studies. (Ebert & Duarte, 2018) In fact, we are witnessing this transformation unfold everyday both indoors and outdoors. It both shapes and changes the way we interact with our human and non-human environment.

Altogether, the rise of Industry 4.0 with smart connected technologies, AI, cyberphysical systems, Internet of things, augmented reality, big data, and others is not only transforming the manufacturing and the factory floor but also the workforce (VIAR, 2018, as cited in Dirik, 2022).

Discussion

New modes of working

The global economy is shrinking due to slower rates of growth, especially hitting manufacturing businesses with the demand for their goods being less and less sought after (Dirik, 2022).

Germany was the place where people first spoke about the digital transformation in manufacturing as the "Industry 4.0″, in 2011, seen as "an allusion ex-ante to a fourth industrial revolution". (Lasi et al., 2014, as cited in Klingenberg et al., 2022) A 2014 study on the term coined back in 2011, states that

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this eponym was rather limited to the German-speaking area. (Lasi et al., 2014, as cited in Klingenberg et al., 2022).

As we witness today, it's much more common to hear people talk of Industry 4.0 today, within both business and academia to denote said revolution and its effects. This popularity notwithstanding, in recent studies too, there's also the view that this transformation being called revolution is lacking systematically explained evidence (Klingenberg et al., 2022).

Terminological differences aside, this new transformation that's still in the works, is reshaping manufacturing processes and replacing in part or fully the people who used to run those processes, resulting in a rapidly changing perception of work and workplaces. Earlier, for millennials and later for Generation Z, the values with regards to work started to differentiate; autonomy, flexibility, mobility and good communication at work have become their primary criteria. This goes hand in hand with a starking decline of employees' sense of belonging to the workplace. This is all the while as the generation shift is fast-paced, especially in developed nations, making digital skills and a need to adapt to an environment shaped by it more and more paramount (Dirik, 2022).

As for the introduction or the fast spread of off-site or hybrid working models following the COVID-19 pandemic, despite the positive connotation of the words such as "flexible, independent", it might in reality be characterized by comparatively negative notions such as fear of losing one's job, instability, insecurity and so on. (Doucette & Bradford, 2019; Friedman, 2014, pp. 184, 1218, as cited in Dirik, 2022). Besides, the acceptance and adoption rates are not soaring among business managers: "The pandemic has shown that a new hybrid way of working is possible at greater scale than imaged in previous years, yet business leaders remain uncertain about the productivity outcomes of the shift to remote or hybrid work. Overall, 78% of business leaders expect some negative impact of the current way of working on worker productivity, with 22% expecting a strong negative impact and only 15% believing that it will have no impact or a positive impact on productivity. (World Economic Forum, 2020, p. 18)", as cited in Dirik 2022). Perhaps this fear is not completely unfounded: remote work can end up in up to 17% less productivity and 24% higher turnover among employees. It's yet to be understood how the new world of work will navigate this spatial locality-related disengagement problem (Dirik, 2022). Moreover, a part of this new world of work, the gig economy, made possible by digitization, denoting a contemporary nature of work is highlighted by transient and perhaps more importantly, temporal jobs carried out by contractors(not officially employees) and freelancers rather than traditional full-time employees (Dirik, 2022).

Aside from the gig economy's detrimental product, temporal jobs, to date, one issue researchers and the business world seem to share a view on is that the unskilled labor unemployment problem is here to stay for some time more, at least as far as the fourth industrial revolution is concerned. (Bonekamp & Sure, 2015, p. 34, as cited in Dirik, 2022) One thing's for sure, the skills that are deemed to be in high demand are like so because of the jobs that are in high demand. And practically every worker will witness one way or the other the sweeping forces of Industry 4.0 with its "AI, humanoid robots, hyperconnected systems, and others" (Bowles, 2014, p. 1; Brynjolfsson & McAfee, 2014, p. 318, as cited in Dirik, 2022).

Internet of things (IoT)

Of all things that's acting in the front line towards transforming our way of living, Internet of things/objects (IoT) is now a common term to come across. This very concept by itself is reshaping numerous aspects of today's society, from technology and business to marketing and general human behavior. It forces changes that dearly affect multiple interest groups in a society as well, which, as we will be discussing within the case of Martı TAG from Türkiye, could bring about both progression and disputes.

Oxford Reference defines IoT, ie. Internet of things as follows: "a system of interrelated computing devices, machines, objects, etc. that have the ability to transmit data over a network without the need for human intervention". This idea of embedded internet in devices that can make decisions almost completely by themselves contributes to digital transformation to a great degree by facilitating smart environments such as the so-called smart homes, automobiles and workplaces, automating processes, and generating valuable data along the way. A recent example, a sensational one too in Türkiye is the carpool service called TAG, offered by a national start-up called Martı.

At the time of writing this paper, according to the user agreement on the terms page of the company's website, "MARTI offers this vehicle/travel sharing platform provision service, which is offered strictly for non-profit purposes, where Users can make a journey by matching with TAG users who share vehicles within the scope of memorial transport by logging in to the TAG option through the MARTI application and enabling contact between the Users for the specific journey to be made" (MARTI İLERİ TEKNOLOJİ A.Ş. (n.d.). This most likely makes for a faster and easier acceptance among the potential user base, especially for the drivers. Also taking into account that the Western counterparts of the app are practically not constituting a rivalry within the country; with Uber running operations after a turmoil of lawsuits only partially in a limited area in a handful of cities, and the other famous ride-hailing service, Bolt, is not avail-

able. (Turkey: Appeals Court Lifts Ban on Access to Uber App, n.d.) (Uber Türkiye'de "Yeni Şehirler" Hedefliyor, n.d.) This is not to say that the TAG service by Martı did not face legal, cultural and political challenges, including some serious backlash from the licensed taxi drivers union, known colloquially as "yellow cabs", against TAG drivers who are accused by the said union of assisting pirate passenger transportation, as well as several court cases claiming that Martı TAG creates an environment of unfair competition in cab fares.

In a recent court hearing of a series of lawsuits before it, the Turkish court of appeal ruled in favor of the "TAG" section of the application in November 2024, declining the court case against it by the Istanbul Chamber of Taxi Drivers with the request of a ban on the application's TAG service. Upon the decision, Oğuz Alper Öktem, founder of Martı TAG, said, "The righteous are in no hurry. The adversaries of Turkish technology have finally been defeated. The good guys won. Use Martı TAG more and more" (Dünya Gazetesi [News Center], 2024).

The clash in Türkiye between a product of gig economy, Martı TAG and the conventional yellow cab community will likely continue for some time into the future; with that, the service is already enjoying a high rate of satisfaction, on the report of a national news agency that's based on a survey conducted by AREA Research: the research was performed in a total of 65 districts that span five major cities; Istanbul, Ankara, Izmir, Antalya and Kocaeli, between October 19 and 27, 2024, with 3,728 people aged 16 and upwards using the tablet-assisted face-to-face survey(CAPI) method (DHA, 2024).

If we were to talk of any smart decision by the founder of Martı, we could point to his inclusion of the app's audience into the debate by drawing attention to the stress built up around the taxi transportation problem in Türkiye; which exists for some time now due to a disproportion between a steadily increasing population in metropoles versus a strangely limited number of taxi plate numbers, which are issued by local governments. This imbalance is often attributed to the self-aggrandizement of taxi plate owners who are said to be trying to capitalize on the one-sided value of this scarce supply versus growing demand, resulting in overly expensive plate numbers, making it for a group of people an investment tool (Ocalir & Yalciner Ercoskun, 2019).

Influencer Marketing

Digital technologies made it possible to attract less affluent or non-urban consumers by combining traditional channels with online messaging (Mahajan, 2020).

As defined in A Dictionary of Social Media, "influencer marketing is the strategy of promoting brands, products, or services with selected individuals who are judged most likely to exercise a significant influence on purchase decisions within a particular target market" (Chandler & Munday, 2016). In accordance with this approach, it can be argued that a certain brand of any size could benefit from this by bridging the gap that may be present in terms of trust, customer loyalty and affinity. This could be the case even with brands with high online-presence; needing a hand in reaching out to audiences in a better light: When it comes to online brand messaging, it might not always reach the intended customer base or in a desired way: up to 25.2% of U.S. Internet users had ads blocked on their devices in 2018. In light of this, brands nowadays leverage social media channels and collaborate with people with a high follower count using these media. "Marketing professionals tend to view social media as an economical advertising channel. In this sense, an influencer is supposed to handle the upstream part of a brand strategy by generating leads by creating visibility through product placement on social networks" (Audrezet & de Kerviler, 2019).

To get another perspective as to why this strategy of increasing visibility through influencers could work, let us take a look at digital ad-blocking numbers in a report format:

According to the "Adblocking Report 2018" by eyeo, a German content monetization company that's associated with the famous ad blocking extension ABP, around 18% of US internet users have ads blocked on desktop; this ratio is 20% for the EU desktop users, and overall, almost half of all the internet users around the world are blocking ads and the number is expected to grow each year (Acceptable Ads Committee, 2018).

A large portion of the ad blocking audience consists of millennials who are educated, with high tech skills, enjoying above average income, and have no issues buying something online in full. Ad-blocking users represent a consumer segment with a very high potential. They demonstrate a greater likelihood for online purchasing, with some studies suggesting they are up to 80% more likely to shop online. Furthermore, they are more responsive to online advertising and exhibit higher monthly online spending compared to non-ad-blocking users. Data from Mozilla indicates that this group is also spending more time online, browsing 28% more and loading 15% more pages than their non-ad-blocking counterparts (Acceptable Ads Committee, 2018).

In such an environment, one can interpret that engaging people 'with people' can potentially balance, in part or fully, the effects of blocked ads brands and companies are paying to have their image displayed.
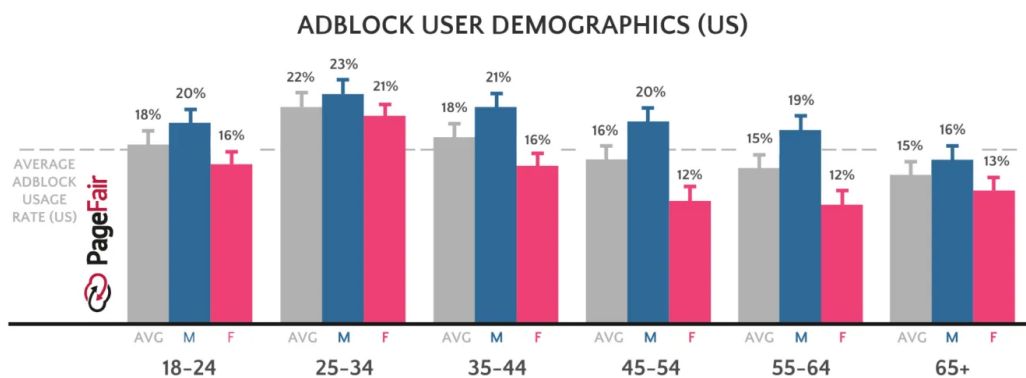
Image 1 – PageFair Adblock report 2017

According to Collabstr 2025 Influencer Marketing Report that's based on Statista, the influencer marketing market will reach $22.2 billion by 2025 (Collabstr, 2025).

With this high growth potential in mind, let us look at several examples from different sectors showing how the right kind of engagement between marketing departments and influencers can yield good results.

ASOS's influencer marketing strategy centers on a curated group of influencers, known as "insiders", who embody diverse fashion styles and body types. These insiders act as brand ambassadors, consistently showcasing ASOS products through outfits and related items on dedicated social media accounts. This approach aims to cultivate an authentic brand image through long-term engagement with relatable influencers (Audrezet & de Kerviler, 2019).

Multinational cosmetic brand L'Oréal has gone down a similar road: "The brand brought together a 'beauty squad' that's made up of experts and brand-ambassadors who take part in new product development, publish simple guides and provide user tips on various L'Oréal social media accounts (Audrezet & de Kerviler, 2019).

In the below table, we will look at how brand management in terms of influencer marketing can also take on different shapes as far as the business model is concerned: one of these approaches is more of a shorter term nature, that is the transactional agreement, which, as the name suggests, has a life cycle so long as that of the campaign. It usually has a strict goal regarding ROI (Return on Investment) and the influencer is only a vehicle for the brand image. Conversely, with the relational approach, for which the selection criteria is stricter, the influencer takes on a more complex role and a place in the brand's communication strategy; engaging with the community on a higher level, rather more irreplaceable for the brand and one that tends to be a longer term.

	Transactional approach	Relational approach
Strategic positioning	Influencer is a tool to execute the brand strategy	Influencer is an expert who shapes the brand strategy
Role	Product endorser	Brand ambassador
Selection criteria	Followership size	Fit with brand image
Contract	Per-campaign contract	Long-term contract
Metrics	ROI in sales per campaign	Annual ROI in brand image and community engagement
Costs of switching	Low	High
Communication	Standardized	Customized
Management	Delegated to agency	Direct relationship

Source: Alice Audrezet and Gwarlann de Kerviler   © HBR.ORG

Image 2 – Alice Audrezet and Gwarlann de Kerviler, as published on HBR.ORG

The positive effect of the relationship-based approach on the results are worth noting: following the launch of its Insiders program, Asos's social media following increased from a mere 123,000 to

200,000 in a year, according to data from www.socialblade.com, and L'Oréal's Beauty Squad saw a rise in followers from 4.6 million to 6.3 million in the same time frame (Audrezet & de Kerviler, 2019).

Despite this, companies tend to play safe and stick to a more transactional approach since a relational strategic partner comes with a higher cost in terms of monetary and time investment, as we can see in the comparison table above, as well as making it necessary for the brand to follow an entirely different marketing plan. With a relational approach, there arises the need of an expertise with which right and long-term relations with the influencers can be established, including finding them in the first place and adapting to their style thus maintaining the partnership.

One caveat within the realm of influencer marketing can be the recent emergence of virtual influencers, that is, virtual personas advocating brands, which is leading to ethical concerns since they are created by companies themselves, essentially meaning that they advocate the brands solely on profit basis. Of these, there is even one that made into the list of the 25 most influential people by Time Magazine: Lil Miquela(@lilmiquela) (Byun & Ahn, 2023, as cited in Lee et al., 2024) It looks as though we will continue speaking about this area in marketing more and more, within its own development. We've seen with examples that if done right, marketing strategies that's enriched with an influencer partnership can help increase brand awareness and significantly increase returns.

Conclusion

This paper has tried to explore the interaction between digital transformation and three key areas of the writer's choice: new modes of working, the integration of IoT within urban micromobility, and influencer marketing. We have seen that although each area offers significant potential, they also present distinct challenges. With the rising new work models, employers are forced to look at their employees through a different lens; taking into consideration their well-being and communicating with them more clearly. The realization of smart cities through IoT-powered micromobility and its side products call for addressing critical issues regarding local laws, security, and infrastructure integration. And finally, the effectiveness of influencer marketing relies on navigating the complexities of authenticity and transparency. Moving forward, it is important to adopt an integral viewpoint that acknowledges the interconnectedness of these areas. Without a doubt, further research exploring the transforming variabilities within these fields would constitute a valuable guide to inform policy and practice, seeing to it that the benefits of digital transformation are realized while alleviating the potential risks.

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