

# Digital Labelling Green Paper

July 2023

## Contents

1. Introduction .....	3
2. Why we need a harmonised EU approach to digital labelling .....	4
3. Key pillars of a future-proof approach to digital labelling .....	6
4. Call to action .....	11

# 1. Introduction

In the later part of 2023, under the umbrella of the [Farm to Fork \(F2F\) Strategy](#), the European Commission (the Commission) is expected to present a proposal for revision of [Regulation No. 1169/2011 on the provision of food information to consumers](#) (FIC Regulation). The aim of revising the FIC Regulation is to ensure better labelling information to help consumers make healthier and more sustainable food choices and tackle food waste, by proposing to:

- Introduce harmonised mandatory front-of-pack nutrition labelling and set nutrient profiling criteria to restrict claims made on foods;
- Extend mandatory origin or provenance information for certain products;
- Revise the rules on date marking ('use by' and 'best before' dates).

The F2F Strategy set that the Commission will explore new ways to provide information to consumers through other means including digital, to improve the accessibility of food information for all, including visually impaired persons. Despite this, the topic of providing information to consumers through digital means has not featured prominently neither on the regulatory agenda nor in the broader public conversation around labelling of food and drink products.

Looking beyond the food and drink sector, current EU regulation of digital labelling makes digital labelling a reality in almost all other areas of consumer life. This encouraging trend shows how digital technology is already in use to advance consumer protection and enable informed consumer choice. It has become a valuable tool to increase sustainability standards and transparency practices across value chains, which represents a key goal of the current Commission's mandate. Finally, digital labelling makes it possible to localise information provided to consumer and make it available in local market languages. However, the lack of a coherent approach to digital labelling in the EU has led to separate pieces of policy instruments working as disjointed levers.

With consumers increasingly encountering digital labels on products, there is a need for a coherent and regulated approach to digital labelling in providing information to consumers. Such an approach must also be applicable to digital labelling in the food and drink sector as a complementary mean to provide mandatory product information. The food and drink industry has rolled-out different digital labelling initiatives to provide an additional layer of information to consumers, but together with the multitude of national and EU-level digital labelling regulation there is now a risk of unintentional gaps and obstacles being created that put consumers at a disadvantage and cause fragmentation of the Single Market.

The fundamental role that the Commission plays in creating common policies that reinforce the Single Market is now coming to the fore. 30 years into the creation of the Single Market, the Commission is preparing to present a strategy for economic security which is expected to further the Single Market. The time is right for the Commission to put efforts into strengthening the Single Market with respect to consumers and improving the reality of consumers' access to product information around the EU as well.

The revision of the FIC Regulation is a unique opportunity for devising a coherent, EU-wide approach to digital labelling as a complementary mean to provide mandatory product information to consumers, and how digital labels are deployed across the food and drink sector. Through such an overarching approach, the Commission will help bridge the gaps in consumers' access to information across different products, future-proof Europe's regulation on labelling, and deliver on its commitment to a stronger Single Market that benefits the consumers and is the foundation of the EU.

## **2. Why we need a harmonised EU approach to digital labelling**

Digital labelling of products is by no means a novelty. Leveraging digital tools has been widely recognised by the Commission as a way to achieve priorities on the policy agenda, as well as help tackle the effects of the never-before-seen crises like the COVID-19 pandemic or the Russian invasion of Ukraine. The EU digital COVID-19 certificate is the most prominent example of the Commission's leadership in rolling-out regulation that enables everyday use of digital technology, and more specifically quick-response (QR) codes.

Currently in the EU, we are seeing a number of laws and pending initiatives that already include or propose implementation of digital labelling for provision of information to consumers, including some that appear on everyday products in consumers' life.<sup>1</sup> For instance, mandatory information on specific fishery and aquaculture products may already be provided through digital labels; rules are in place for digital labelling of centrally authorised medicinal products; energy labelling of energy-related products; and labelling of tires resorts to digital labelling to provide information to consumers. As of 8 December 2023, the CMO Regulation No. 2021/2117 renders mandatory that wine and aromatised wine products communicate list of ingredients and nutrition declaration and, under specific conditions, provide the information online. In the upcoming period, we will see the deliberation on digital labels in the context of legislative proposals pertaining to batteries and waste batteries, the ecodesign, packaging and packaging waste, or the EU fertilising products.

Today, there is a growing demand for enhanced transparency for fast-moving consumer goods (FMCG) and production processes. The consumer need for additional information and guidance is evident in modern-day consumer phenomena like the use of the mobile food app "Yuka"<sup>2</sup> or the prominent role that social media influencers play in driving consumer choice. As consumers are increasingly aware of health and sustainability issues driven by consumer choice, they are resorting to searching for additional product information online on their own, including likely encountering inaccurate or irrelevant information. This exposes consumers to potential risks like being impacted by fake or falsified information, and unfair trading practices across the Single Market. Additionally, consumers are not benefiting from safeguards of a

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<sup>1</sup> For more information on legislative initiatives, please see FoodDrinkEurope's "Digital Labelling in the EU. State-of-Play Report".

<sup>2</sup> Yuka is a mobile app launched in 2017 that allows users to scan the barcode of foods and personal care products to access rating information on the product's impact on health. The analysis is based on three objective criteria – nutritional quality, presence of additives, and organic aspect of the product – and redirects to similar alternative products in case the system displays a negative impact on health.

coherent approach to digital labelling and are not, in the context of the Green Deal, adequately supported through information and education to make sustainable consumer choices.

The regulatory demand for more transparency and information to be provided on-pack continues to increase while the amount of space available on packaging is decreasing due to the fact that operators are required to reduce packaging for environmental reasons. Enhancing product transparency cannot rely on additional on-product labelling as it overloads consumers with information on the product and also conflicts with the environmental imperative of reducing packaging for products. Enhanced transparency of information to consumers cannot be done at the expense of legibility of on-pack information. Digital labelling and its flexible online environment provide a workable solution that can accommodate the various demands for enhanced product transparency and information in a way that is compatible with the imperatives of the European Green Deal.

Meanwhile, the food and drink industry has launched a number of self-regulatory measures on digital labelling, to respond to the growing demand for transparency.<sup>3</sup> This notably includes the U-label platform for wine and spirits, launched by spiritsEurope and the Comité Européen des Entreprises Vins (CEEV); Pernod Ricard's eLabel; Whisky Barrel's digital provenance certificate; and Mondelēz International's Snacking Right pilot programme implementing QR codes on-pack products to provide consumers with further information related to their sustainability strategy and packaging recyclability. The roll-out rate and scope of digital labels propped-up across regulation and industry initiatives gives rise to concern that, lacking a horizontal and harmonised approach to digital labelling, the EU is facing an impermeable web of digital labelling that differs across different sectors and products, to the detriment of the consumer. A harmonised EU approach to digital labelling that also applies to the food and drink sector is essential due to the crucial role that food and drink products play in consumers' lives. Delivering a harmonised approach is supportive of the Commission's priority to drive healthier and more sustainable consumer choice while strengthening the Single Market through common policies.

Market demand for transparency of different product information and consumer protection in the digital age must be met with a harmonised EU approach for digital labelling that works for the food and drink sector. The food and drink industry has already been rolling-out voluntary digital labelling systems, and at a more global level, the Codex Alimentarius Commission has been deliberating on the topic of digital labelling since 2017, in recognition of the importance of this issue globally. Against this backdrop, the Commission is well-positioned to lead as the global example on how to approach digital labelling.

Additionally, promoting sustainability practices is high on the Commission's agenda. Digital labelling has the potential to accelerate sustainability practices and unlock potential synergies across product supply chains. It also empowers consumers by providing access to enhanced information about supply chains and sustainability performance in a way that can help mainstream informed and conscious sustainable consumer choices. The enhanced transparency enabled by integration of digital labelling across the whole product value chain

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<sup>3</sup> For more information on self-regulatory initiatives, please see FoodDrinkEurope's "Digital Labelling in the EU State-of-Play Report".

will provide information that is key to optimising sustainability performance. This may additionally encourage companies to enhance sustainability practices along the value chain, justify their green claims, and unlock more circularity and efficiency, and overall increase reliability of supplementary product information.

From the aspect of competitiveness of the EU industry, it is necessary to bring the food and drink sector into the digital era. In parallel, and to protect consumers from unregulated and incoherent provision of product information online, it is necessary to have EU-wide rules and alignment on digital labelling across products, sectors and Member States. Finally, as national legislators are picking up on the digital labelling trend, the EU must provide a regulatory framework to avoid diverging rules across the Single Market, support free movement of goods and provide EU-wide equitable consumer protection.

### **3. Key pillars of a future-proof approach to digital labelling**

Introducing a harmonised approach to digital labelling – as a complementary mean to provide mandatory information on food and drink products – will elevate the protection and industry standards when it comes to providing information to consumers. The EU has shown its leadership when it comes to innovative regulation and setting standards that boost protection of consumers. Based on existing practices and approaches, there are different aspects of digital labelling that should be taken into account in the conversation around digital labelling in the EU.

#### *3.1. Future-proofing regulation of the food and drink industry*

The 2021 Commission [Communication on Better Regulation, “Joining forces to make better laws”](#) (the Communication), recognises that EU legislation is there to bring benefits by making a concrete and positive contribution to the lives of its citizens, facilitating businesses and helping face current and future challenges. The EU policies and laws adopted today affect citizens and businesses for generations to come. This is why the unique opportunity presented by the revision of the FIC Regulation is so important. It is imperative to bring digital labelling in the food and drink industry in step with how the Commission is proposing and implementing digital labelling in other sectors. The revision of the FIC Regulation must future-proof the food and drink industry, anticipate changes and proactively shape future technological developments.

The proliferation of regulation implementing and proposing digital labelling is currently covering a significant number of consumer products.<sup>4</sup> Having in mind that digital labelling is already an optional solution to provide information to consumers for a variety of products, the same must be made possible for the food and drink industry and in a way that acknowledges the speed at which consumer technology is advancing. Not only is it necessary to introduce a harmonised approach to digital labelling and include the food and drink industry into the scope of existing digital labelling regulation, but it should be done in a way that is technologically

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<sup>4</sup> For more information on the legislative initiatives, please see FoodDrinkEurope’s “Digital Labelling in the EU State-of-Play Report”.

agnostic so that future advancement in technology is not unintentionally excluded from application.

The Communication also lays ground for integration of strategic foresight in policymaking. Looking beyond the state of the world today, as the COVID-19 pandemic has shown, the EU must deliver well-designed policies to strengthen the EU's resilience, seize opportunities in strategic sectors and address vulnerabilities in line with the EU's overarching goals. The Commission is dedicated to making sure that EU policies are fit for the future, for instance in terms of taking on board [emerging megatrends](#), such as accelerating technological change and hyperconnectivity. It is this dedication that must be remembered in the revision of the FIC Regulation and broader discussion around a unified approach to digital labelling.

The growing impact of technology and digital connectivity is at the heart of the conversation around the coherent approach to digital labelling in the EU that also includes the food and drink sector. In this context, strategic and science-based foresight must continue to play a key role in future-proofing EU policymaking. This, according to the Communication and fully applicable to the matter of defining a horizontal approach to regulating digital labelling, will be achieved by ensuring that decisions taken today are grounded in a longer-term perspective, bring a dynamic perspective of synergies and trade-offs among EU policy goals, thereby supporting the coherence of EU policies.

### *3.2. Harnessing the power of the digital technology in providing information to consumers and reinforcing the Single Market*

Introducing a harmonised approach to digital labelling is in alignment with the Commission's approach to harnessing the power of digital technologies for the benefit of EU's citizens and economy. To this end, a harmonised approach to digital labelling should deliver a complementary mean to provide mandatory product information, in addition to the mandatory on-pack labels and information available to consumers. Harmonising existing digital labelling approaches across industries and products will benefit consumers, elevate consumer protection and strengthen the Single Market.

Having an EU-wide, country-, sector-, and product-agnostic approach in place for digital labelling will provide consumers across the EU with access to trusted information provided through digital means, which currently is not the case. The Single Market, fundamental to the EU, will be reinforced through a horizontal approach to digital labelling. Current trends of diverging national rules and industry initiatives that are fragmenting the Single Market will be reversed.

### *3.3. Supporting businesses to respond to consumer pressure to access information*

European consumers have been increasingly sensitive and demanding access to transparent and accurate product information from trusted sources. This has been in particular the case for the food and drink industry, which is expected for such a pivotal sector. In response to this pressure, the industry has already responded with some voluntary, self-regulatory digital labelling initiatives.

Harmonising the approach to digital labelling will remove some of the pressure on the industry to voluntarily respond to consumer demand and avoid the development of disparate digital labelling solutions. It can be expected that, with a harmonised approach to digital labelling, producers will have more certainty about the infrastructure and legal considerations about sharing information. This would especially benefit micro and small enterprises that need digital labelling infrastructure to provide additional product information to their consumers. Very often it is the SMEs that produce limited series of products that have limited capacity to deploy their own digital solutions, and need to be safeguarded against competition from the biggest market competitors.

### *3.4. Supporting resilience of the food and drink industry in the light of future crises and times of emergencies*

A specific element of labelling is the enforcement of European rules in times of extreme crisis or emergencies. During the recent crises that have led to disruption of global supply chains, the food and drink industry was faced with a significant challenge of needing to respond quickly to new and evolving operational and production reality while remaining compliant with applicable laws. For instance, in the aftermath of the 2022 Russian invasion of Ukraine, some Member States sought to grant temporary flexibility on labelling and official controls across the EU, resulting in a temporary fragmentation of the Single Market with a detrimental impact on intra-EU trade. In the future, due to climate change and escalating geopolitical pressures, disruption in availability of raw materials and functioning of supply chains for food and drink products can be foreseen and should be regulated.

Introducing a coherent EU approach to digital labelling as a complementary mean to provide mandatory product information that applies to the food and drink sector will in a state of emergency or a crisis help support the resilience of the industry. Digital labelling, especially systems leveraging real-time blockchain technology, can help foresee the needs of the industry in light of future crises and emergencies.<sup>5</sup> Digital labelling offers great flexibility in providing product information to consumers and also high-pace adaptability in an emergency market situation means that consumers can be accurately and fully informed of changes in supply chain or origin of raw materials. This functionality can hardly be met by any other analogue solution in times of emergencies, without undue and disproportionate cost impact for the industry.

### *3.5. Facilitating competitiveness of, and trade and investment in EU's food and drink sector*

Globally recognised European food quality and safety standards have made the European food and drink industry one of the highest respected and pillars of the EU's trade relations globally. Harmonising digital labelling practices through regulation that introduces digital labelling as complementary mean to provide mandatory product information is a significant additional layer for boosting the competitiveness of European products in the global market race for consumer choice.

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<sup>5</sup> See: "Managing disruptions and risks amidst COVID-19 outbreaks: role of blockchain technology in developing resilient food supply chains" Sharma, M., et al., 2022.



The food and drink industry, an economic powerhouse for the EU, must be supported by plans and policies that foster long-term competitiveness of the EU. Bringing to life a bold, future-proof regulatory approach to digital labelling will further unlock global competitiveness of the industry, attract additional investment and bolster innovation. The kind of technology that enables digital labelling today is likely to be advanced at a greater pace in the future. Today's regulation needs to establish essential principles for how digital technology should be operationalised to deliver information to consumers. Otherwise, the EU's food and drink industry risks increasingly lagging behind other European industries and global competitors benefiting from advancements in digital technologies.

### *3.6. Accelerating the uptake of sustainability practices*

Digital labelling may facilitate greater transparency and flexibility compared to physical labels, and deliver benefits for mainstreaming sustainability for both consumers and value chain stakeholders.<sup>6</sup> Digital labels can easily be updated in real-time to reflect changes in ingredients, manufacturing practices, or certifications without the need for reprinting. This agility ensures that consumers and value chain stakeholders always have access to the most accurate and up-to-date information. This can unlock collaborative potential among value chain stakeholders for greater sustainability performance and facilitate the development of more sustainable, resilient and circular value chains. With respect to consumers, product information has the potential to inform and to some extent encourage education of consumers on these topics and, ultimately, their uptake of sustainable consumption habits.

In that sense, it is crucial to ensure that digital labelling provides relevant and accurate information, in a way that is tailored to consumers or value chain stakeholders, such that it provides the flexibility and transparency necessary to unlock digital labelling's potential to support increased sustainability.

### *3.7. Delivering transparency and trust*

Harmonising the EU's approach to digital labelling will deliver essential benefits to the consumers: a standardised level-playing field of transparency, accuracy and trustworthiness of the information, and digestible and user-friendly information tailored to consumers' needs and based on their preferences. Consumers already seek additional product information and guidance on responsible choice, in addition to what is provided by the mandatory on-pack declarations, and products marked with digital labelling solutions benefit from above-average trust levels.<sup>7</sup>

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<sup>6</sup> See: "The Effect of Blockchain Technology on Supply Chain Sustainability Performances" Park, A., et al., 2021.

<sup>7</sup> See FoodDrinkEurope's "Digital Labelling in the EU State-of-Play Report" for an up-to-date overview of existing scientific literature on digital labelling and its benefits for consumer protection and sustainability. For instance: "Using blockchain to signal quality in the food supply chain: The impact on consumer purchase intentions and the moderating effect of brand familiarity" Treiblmaier H., & Garaus M., 2023; "Sustainable development and greenwashing: How blockchain technology information can empower green consumers" Nygaard, A., et al., 2022; "Consumer purchase intention towards a QR code for antibiotic information: an exploratory study" Bradford, H., et al., 2022; "The influencing factors of digital health passport adoption and acceptance during COVID-19 in Saudi Arabia" Samha A. K., et al., 2021; "The influence of blockchain-based food traceability on retailer choice: The mediating role of trust" Garaus, M, & Treiblmaier, 2021.

By harmonising the approach to digital labelling as a complementary mean to provide mandatory product information, the EU has the opportunity to establish a transparent and trustworthy source of information for consumers and protect them and the industry from disinformation campaigns. This would ensure that consumers can rely on information delivered through digital means that abide by harmonised principles regarding accuracy, transparency, reliability, and fairness. Harmonisation of approach to digital labelling as a complementary mean to provide mandatory product information presents an opportunity to extend the critical consumer protections provided by rules on responsible marketing. It also facilitates the delivery of key information to population segments with specific needs, such as religious groups with strict dietary requirements who are struggling with finding reliable information on all foods and their origins,<sup>8</sup> or otherwise make product information available to consumers in their own local language. In the long-term, consumers in the EU would be better informed and benefit from safeguards around responsible use of digital ways of communicating product information. The food and drink industry would, in turn, benefit from the increased trust in products and a transparent, equitable digital labelling system.

### *3.8. Consumer education and empowerment*

Digitalisation trends indicate an encouraging rise in digital literacy, accelerated by the COVID-19 pandemic.<sup>9</sup> This means that we are looking into a near future when digital natives will dominate the consumer population in Europe. Currently, the research shows that access to digital labelling matters mainly to those who are already interested in accessing additional product information.<sup>10</sup> This is the case both for population groups that are highly engaged in specific topics, as it is for highly engaging products that motivate consumers to seek additional information on, for instance, food and its impact on health and well-being. The increasingly more digitally savvy consumers are, however, going to be increasingly more comfortable in seeking additional product information online and will be expecting it.

A coherent approach to digital labelling in the EU, applying to the food and drink industry as well, will respond to the habits, the needs, the expectations and the skills of the younger generations.<sup>11</sup> Concerns around excluding proportions of the population, whether on basis of skills or access to technology should be balanced against addressing the digital information needs of consumer populations already seeking product information. As mentioned above, those populations are currently exposed to conflicting and diverging approaches to providing information to consumers and are also navigating an online landscape of information not based on scientific evidence and contrary to EU regulations and legislation.

Regardless how product information is provided or accessed, consumer skill and ability to understand the information received is key. Consumer choice and ability to make an informed decision does not happen in a vacuum: It is driven by broader socio-economic environment, and not just labelling. If we want to have well-informed consumers who have the ability to

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<sup>8</sup> See: "Online traceability for halal product information: perceptions of Muslim consumers in Indonesia" Sagoyo, Djoko, 2018.

<sup>9</sup> See: "Rise of the QR code application adoption: towards a conceptual post-covid-19 smart sustainable tourism framework" Azmadi, A. S. A., et al., 2022; and "The influencing factors of digital health passport adoption and acceptance during COVID-19 in Saudi Arabia" Samha A. K., et al., 2022.

<sup>10</sup> See: "Influence of Communication Channel and Information Form on Consumers' Purchase Behavior" Wang, Y., et al., 2022.

<sup>11</sup> See: "Improving Food Consciousness – Opportunities of Smartphone Apps to Access" Toth, M. et al., 2021.

make informed decision, we require a holistic approach to public health and consumer education. Similarly, research shows that consumers ought to be educated on technologies behind digital labelling solutions to unlock benefits and improve high trust levels in products.<sup>12</sup> Harmonising digital labelling requires a consumer-centric approach that puts user experience at the heart of regulatory considerations. Consumer choice must be enabled in a holistic way through public educational programs, and supported with regulatory approaches that enable access to trusted sources of information, like in the case of digital labels as a way to access product information beyond the on-pack label. User-friendly design, accessibility and accuracy standards, information organisation and structure in online environments must be carefully addressed and tested. Existing examples where digital labelling had already been applied can provide common harmonising principles for the structural and technological regulatory approaches to digital labelling in the EU.<sup>13</sup>

## 4. Call to action

The above pillars of a future-proof approach to digital labelling align with and complement the [joint industry alliance call to the Commission](#), from March 2023, to provide digital solutions for product information that work for all.

Additionally, FoodDrinkEurope calls for the following:

*4.1. Integrating an EU-wide digital labelling framework for food and drink products into the upcoming revision of the FIC Regulation, to introduce digital labelling as a complementary mean to provide mandatory product information.*

Such legislation will not only empower consumers to access a wide range of complementary and digestible information and to make conscious choices, but it will also harmonise self-regulatory initiatives across the sector and support businesses in further addressing the increasing demand for consumer information/protection.

*4.2. Creating an evidence-based and well-functioning framework for digital labelling of food and drink products, which combines the need for resilient and sustainable food systems and modern digital infrastructure.*

The Commission's wide range of competences and expertise in regulating digital labels for other sectors present a sound foundation to deliver a future-proof regulatory framework for digital labelling.

*4.3. Developing appropriate safeguards to ensure digital labelling for food and drink products is compliant with EU data protection rules and to prevent the use of digital labelling environment for targeted or proscribed marketing and sales practices.*

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<sup>12</sup> See: "Blockchain-enabled Sustainability Labeling in the Fashion Industry" Remme, A. M., et al., 2022; and "Traditional Foods at the Click of a Button: The Preference for the Online Purchase of Romanian Traditional Foods during the COVID-19 Pandemic" Petrescu-Mag, R.M., et al, 2020.

<sup>13</sup> For more information on digital labelling applications, please see FoodDrinkEurope's "Digital Labelling in the EU State-of-Play Report".

Digital labelling for food and drink products is key to promote transparency and trust in the industry, leading to higher standards of consumer protection across the EU. Safeguards for consumer privacy and preventing commercialisation of product information are therefore a crucial aspect of digital labelling regulation to prevent the operators' misuse, circumventing advertising rules, or data privacy misuse.

*4.4. Levelling the playing field across the industry by ensuring legal certainty, transparency and coherence across the EU and Member States to avoid market barriers and strengthen the Single Market.*

A common European approach to digital labelling is crucial to optimise the Single Market, offer economic gains and pave the way for sustainable consumer choice in line with the European Green Deal.

*4.5. Promoting inclusivity and ensuring that food and drink product information is available and accessible to all and in all languages.*

Digital labelling solutions have the potential to leverage novel technologies for information delivery tailored to all consumers around the EU, including those with visual impairments.

The above action points lean onto the role of the Commission and underline opportunities for the EU to additionally assert itself as a global leader in digital labelling. They also entail achieving increased competitiveness of European industry, value chain transparency, consumer protection and sustainability performance of the Single Market within and beyond the EU as essential benefits of a future-proofed harmonising approach to digital labelling. This call should be therefore always considered across a broad spectrum of industry when discussing the need for regulation of digital labelling.