GS1 Ireland

The Global Language of Business

Annual Review and Financial Statements 2021

"The pandemic has demonstrated the importance of end to end traceability throughout the healthcare supply chain. Leveraging GS1 Standards and implementing barcode scanning has not only shown a huge potential to save time and resources - more importantly - it can improve patient safety by giving time back to clinicians while capturing accurate information for decision making."

John Swords,
National Director of Procurement, HSE, and GS1 Ireland Board Member

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Gerry Boylan
Chairperson
GS1 Ireland

Mike Byrne
Chief Executive Officer
GS1 Ireland

Welcome to GS1 Ireland's review of 2021

At GS1, we strive to help all our members and stakeholders – both public and private sector organisations – to best meet the challenges and opportunities presented to them in this ever-changing world.

In reviewing GS1 Ireland's progress in 2021, we tell the story of an extraordinary year and how we have supported our members. We also present in this report our new Strategic Plan for 2022 to 2024.

A key lesson emerging from 2021 is how the COVID-19 pandemic has shown that investment in digital transformation has become an essential business driver for all enterprises, large and small, across all sectors – particularly for GS1 Ireland's key sectors of Retail, Healthcare and Construction. Today, emerging technologies and digitalisation are transforming the provision of goods and services in retail and healthcare at a speed much faster than before – leading to both new opportunities and challenges. GS1 Ireland is proud to help our members to meet both.

GS1 standards – enabling Digital Transformation with GS1 Registry Platforms

To support the growth of e-commerce and to provide industry and consumers with the data they want and need, GS1 Ireland and our colleagues at GS1 Global Office have been working for two years to drastically simplify product identification, verification and data sharing for brand owners, retailers, and other product data users.

Our vision is to ensure every product, location and entity everywhere has its own unique persistent identifier and basic data attributes—allocated according to GS1 standards—and that this information is globally shareable and verifiable by trading partners in both the physical and digital worlds.

We have already brought the foundation of that vision to life by previously launching Barcode Manager and, in 2021 linking it to the GS1 Global Registry Platform. This platform is a global registry containing just enough data to verify any product's identity; and uses Verified by GS1 as a way to access that data. In 2022, we will continue our work to ensure the global GS1 Registry Platform becomes recognised as the foundational component for a vast ecosystem of data and services that will allow business partners to access trusted information about any product, location or entity that has a GS1 identifier. Our goal is to register as many GTINs and Licenses as possible in this global registry, all with the highest level of data quality and completeness, thanks to the collaborative efforts of our membership, stakeholders, and all GS1 Member Organisations around the globe.

Keeping Track of the COVID-19 Vaccine

One of the best examples of how GS1 Ireland supported our members with a national digital transformation initiative involved the shared learnings from the collaboration between the HSE's National Immunisation Office, HSE Procurement, and GS1 Ireland. Widely acknowledged as one of the most successful COVID-19 vaccination traceability programmes in the world, GS1 Ireland was honoured and proud to support the NIO and the HSE with this initiative.

The Challenge: As COVID-19 vaccines became available, Ireland's Health Service Executive (HSE) needed an efficient and effective way of receiving, administering, tracking and reporting vaccinations across its more than 40 Centralised Vaccination Clinics (CVCs). It was important for the HSE's National Immunisation Office (NIO) that no dose

was wasted and that batches of vaccine could be tracked to the point of vaccination.

The Approach: The HSE in collaboration with GS1 Ireland adopted a GS1 standards-based approach for the identification and tracking of vaccines to the point of vaccination. Following an intensive design phase with the HSE project team, two software applications were developed: ScanVax and TrackVax. ScanVax was installed on over 1,000 PCs across the country to allow for the receipt of vaccines. By scanning the barcode on each of the vaccine boxes, vaccine information is uploaded to the national vaccine administration system. This means that vaccinators can select the correct batch when administering the vaccine. TrackVax has been installed in all CVCs across the country, allowing the CVC teams to identify, label, track and report on the vaccines in their centres, and also allowing a much easier vaccine reconciliation process locally and nationally. Both solutions are provided by GS1 Ireland. The full case study is available to download from our website www.gs1ie.org/healthcare.

Industry Engagement

For a member-centric organisation, Industry Engagement is a very important function. We actively engage with existing and prospective members in all our sectors to see how our standards can help them to improve processes, reduce waste, control costs, meet regulatory requirements and make plans to exploit emerging opportunities, all while maintaining a safe environment for all stakeholders.

Standards development, and the implementation of our standards, is a central component of this. For example, as we have identified in our new Strategic Plan for 2022 to 2024, GS1 has set clear goals to deliver clear and measurable improvements in the Construction Sector through the adoption and deployment of our standards and solutions. In achieving our goals, GS1 Ireland is actively participating in several key forums, including the Government's Build Digital Project, the NSAI Building Information Modelling (BIM) standards committee, the Construction IT Alliance (CitA) and, internationally in the Digital Supply Chain in Built Environment (DSCiBE) workgroup – a joint initiative with buildingSMART International.

We believe that GS1 can be the leading source of open, globally unique, persistent, and interoperable standards for identification in construction. These provide the "Golden Thread" of traceability of product information through the development, testing, construction, operational and reuse phases of the product lifecycle. It can have profound implications for health and safety, as well as sustainability.

Our top four priorities – Strategic Plan 2022 to 2024

Building on the momentum we created leading up to the pandemic and in 2020, the financial reports show how GS1 Ireland delivered strong results for its members across its Licensing and Professional & Advisory Services in 2021. These results and our momentum reflect the underlying strength of our integrated strategy and our organisation's future commitment in its new Strategic Plan for 2022 to 2024 in the following four key strategic areas:

- Engagement – Build trusted relationships with our members to understand and answer their challenges.
- Sectors – Position GS1 Ireland as the authority on traceability, sustainability and digital commerce in our key sectors.
- Standards, Services and Solutions – Drive value for members through the wide adoption of GS1 standards, core & value-added services & solutions to accelerate innovation, harmonise new ways of working, and to reduce waste in the sectors we serve.
- Capability – Build on the solid foundation achieved in the previous strategic plan to enable GS1 Ireland to continue to thrive and grow using robust, secure systems, efficient and well-embedded processes, skilled and motivated staff and strong finances & governance

In summary, for all of us at GS1 Ireland and for our members, 2021 has been a year of challenge, change, acceleration, and opportunity. We have learned to work differently. We have strengthened our collaborative mindset. We have continued to drive innovation in the use and adoption of standards-based traceability solutions.

With a backdrop of major conflict in Europe, inflation, and a potential global recession, 2022 promises to be equally challenging for our members. However, our belief in the power of standards to change the way we work and live has become even stronger, and the Board and Executive look forward to working with our members in the coming years to support their businesses with GS1 standards-based solutions. We thank all our members for their continuing support, and we look forward to reporting on our progress in delivering our strategic plan for 2022 to 2024.

Annual Review 2021

Membership Report

At the end of 2021, the core membership of the organisation continued to show steady growth with the number of active members and licence holders increasing over the 12 months to 3,760 (end 2020: 3,642). New members who joined the organisation in 2020 totalled 382. Annual licences issued to members totalled 7,250 in 2021 (end 2020: 7094).

In terms of sectors, Food & Beverage (48 per cent), Consumer Non-Food (24 per cent), and Business Products & Services (10 per cent) continue to account for the bulk of the membership base with continued growth in Healthcare (9 per cent).

Industry Engagement Report: Standards, Services and Solutions

For a member-centric organisation, Industry Engagement is a very important function. We actively engage with existing and prospective members in all our sectors to see how our standards can help them to improve processes, reduce waste, control costs, meet regulatory requirements and make plans to exploit emerging opportunities, all while maintaining a safe environment for all stakeholders. Standards development, and the implementation of our standards, is a central component of this.

The focus on the environment, the circular economy, climate change and sustainability, driven by the EU Commission and the Irish Government in particular, has increased. Awareness is building among members that this will have a direct effect on their organisations, their trading partners and service providers, not to mention their personal lives.

GS1 Ireland is working with the wider GS1 organisation and with partners, locally and internationally, to provide solutions in this area and to demonstrate how they can be applied. We are working closely with EU Regulators to keep abreast of likely requirements.

Sustainability and Traceability

Progress is continuing in Retail/CPG, Food Manufacturing, and Transportation and Logistics. The Construction sector will need to make adjustments to comply with the legislation coming via the European Commission as part of the European Green Deal. GS1 is positioned to help our members to comply with regulations in a way that fits into their existing business processes using GS1 standards.

The **Lean & Green Programme** for logistics CO2 emissions reductions initiated its National Steering Group comprised of founding members and engaged with Irish Transport and Export Industry Associations. One of the key advantages of this programme is that it works for companies of all sizes and measurable results are audited.

To provide information on authentication, provenance, and safety to trading partners and consumers, Traceability continues to be an important business capability in many sectors. Our **fTRACE solution for food traceability** is now being actively used by all the main beef processors. It has been extended with a Transparency capability so that food manufacturers can prove the provenance of the ingredients used in their products.

We are working with a high-profile food producer and retailer to show how our standards can also be used by an SME to provide assurance to their customers and to educate them on issues around food provenance and waste management. Our solution partners are continuing to enhance their solutions in this area.

In the **Construction Sector**, we are working with local and international partners to demonstrate how the use of our identifiers can make a valuable contribution to meeting the need for reporting embodied carbon and fulfilling the requirements for building logbooks and digital product passports.

In **Transport and Logistics,** in part to cater for Brexit, several new standards, tools and implementation guidelines were introduced. These included Supply Chain Traceability of Freight and Last Mile Transport, Scan4Transport (S4T), along with GS1 Standards for Supply Chain Visibility and optimisation with real-time cargo monitoring, Visibility4Cargo (V4C). These standards facilitated exporters and customs organisations in dealing with the European VAT changes that were implemented on 1st July 2021.

For Ports and Shipping, we engaged with Tier 1 & 2 Irish ports regarding the Global Location Data Platform (GLDP) which is a collaboration between the International Taskforce Port Call Optimisation (IPTCO), the Port of Rotterdam

and GS1, supplementing the transport standards while building on standards managed by ISO (International Standards Organisation), IMO (International Maritime Organisation, CEFACT, BIC (International Bureau for Containers) and DCSA (Digital Containers Shipping Association) to allow the global identification of berths and hinterland locations.

Training and Education Services

For Training and Education, an important part of what GS1 Ireland does, we had to pivot to delivering programmes on-line. In common with many others, we miss the possibility for in-person interaction, but the courses worked very well and were well attended. The main areas catered for were Labelling and the Warehouse Label Specification, Electronic Data Interchange, and Unique Device Identification for Healthcare, with many member companies participating. GS1 Ireland has strong links to third-level institutions of education, and we will continue to use those to deliver content to participants in courses on Supply Chain and Logistics, Food Science, Construction, and others - where knowledge of our standards could be beneficial to students.

We also have, through our global organisation, the ability to give our members access to online learning courses using our elearning platform, the GS1 e-Academy. This complements our classroom-based training by providing a library of modules which can be used by members to get introduced to GS1 standards and to re-familiarise themselves with the basic features of each.

Global Standards Development and Management

GS1 Ireland's employees are active participants in many standards' development groups within GS1 and take leadership positions in several of them. These include groups working on RFID and NFC, Digital Signatures, GTIN Guidelines for Construction and Hardware/DIY products, Sustainability, Product Master Data, Electronic Data Interchange (Semantic Models and a new XML standard), Transport and Logistics (Scan4Transport). We also worked on Identification, Data Modelling, Modernisation of GTIN Management, GS1 Digital Link and many other topics. We participate and make presentations at many GS1 Standards and Development events. Our participation in Healthcare standards development is covered in the Healthcare section.

We are continuing to develop our online Barcode Manager tool. This provides a way of storing basic details about products and sharing these to the GS1 Registry Platform. This makes trusted brand-owner data available world-wide to trading partners and potential buyers using our Verified by GS1 (VbG) service. Both of these are free to use for all our members.

Throughout the year, GS1 Industry Engagement has been able to provide advice and consultation to member companies on best practices for implementing all aspects of the GS1 system of standards. One notable example is the development of a labelling specification for a large clothing and household retailer with a global supply chain.

GS1 in Retail

Consumers in the new normal have new expectations, whether they are shopping online or in stores. GS1 standards and services help retailers and brands meet those demands by enabling trusted identification and data sharing.

COVID-19 created unprecedented challenges across the retail supply chain—in apparel, general merchandise, consumer packaged goods, fresh food, food service and more. Possibly one of the biggest impacts that COVID-19 had on the retail sector was the dramatic increase in all things digital – most notably the immediate and massive shift to online shopping and home delivery, including for groceries and fresh foods, two categories which had previously not been as present online.

But even before the global crisis struck, we were already helping the retail sector link all products with complete and accurate data, digitally. One of the foundational goals of GS1, and central to our new Strategic Plan 2022 – 2024, is to ensure that every item has a properly generated GTIN, accompanied by core product data, and to make that trusted data shareable and accessible so that its authenticity can be confirmed. More information on our recent work, at a global level, on the GS1 Registry Platforms, the Verified by GS1 service and the adoption of next generation barcodes is included in the Global Update section of this report.

GS1 helps supply chains become flexible and resilient, enabling smoother operations and more efficient interactions with business partners.

Another impact of the pandemic has been the increased reviews of supply chain regulatory requirements, motivated by the desire of governing bodies to ensure the safety of their citizens. GS1 is helping to address this. The more trusted information that is available about sellers and products, the better for everyone.

Sustainability issues and the circular economy are growing in importance in all parts of the retail sector. From fashion houses and food producers, to DIY and Construction product manufacturers, suppliers, retailers and consumers alike are much more environmentally conscious than they were just a few years ago. Here, too, the ability of the GS1 system of standards to provide trusted information about a product's contents, provenance or recyclability is serving the needs of users around the world.

Enabling traceability and sustainability

GS1 standards help industry achieve agility, flexibility and resilience by enabling visibility of product provenance, status and movement across entire value chains.

GS1 standards provide a common language enabling trading partners and solution providers to speak clearly about the provenance, status and movement of raw materials, products, shipments and more. Soon, we will also be able to better utilise data about precise places such as farms or factories, because we made significant progress on our programme to develop and launch a Global Location Number (GLN) Registry. GLN standards have been modernised and made easier to adopt and use.

We expect social and environmental issues to take on greater importance. We already see many brands placing increased emphasis on optimised packaging, recycling initiatives and the circular economy. GS1 standards provide ways to very accurately describe the materials used in packaging that will make it easier and more efficient to get them into the proper recycling stream.

GS1 standards help ensure that traceability systems and sustainability programmes are interoperable and scalable, so trading partners can share information about raw materials, products, shipments and more.

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Our work with Members this past year has reminded us of the importance providing the retail supply chain with the standards, services, tools and guidelines they need to stay resilient and flexible, no matter what happens.

GS1 and Marketplaces

Marketplaces and the extended marketplace ecosystem need better product identification to meet the demands of today's digital consumer.

Even before the pandemic, online marketplaces and e-commerce sites were disrupting the traditional retail business model and driving change. COVID-19 has exponentially accelerated the pace of this transformation.

We believe that the marketplace ecosystem will benefit from implementing GS1 standards and services into their selling processes, logistics activities and fulfilment operations.

Many actors in this business sector already leverage GS1 standards to improve consumer transparency, product safety, supply chain efficiency and cross border trade processes. GS1's vision is to ensure that our global and neutral standards bring value to the entire ecosystem.

Globally, we have witnessed increased interest and engagement from marketplaces. Google published a recommendation that all sellers on their platform use GS1 GTINs to identify items and enhance product discoverability. Amazon and Cdiscount both continued to encourage their sellers to use GS1 standards. And these are only two examples of the many engagements happening between GS1 and marketplaces, all with the goal to provide consumers with a better shopping experience.

One noteworthy accomplishment of the year was the creation at GS1 Global of a Marketplace Advisory Team—a committee of specialists operating in an advisory capacity to the GS1 Management Board. The Marketplace Advisory Team currently has six members, with representatives from Alibaba, Amazon, bol.com, eBay, Google and METRO Markets.

GS1 standards help marketplaces build consumer trust thanks to unique and accurate product identification and information.

In the coming months and years GS1 will continue to work to help marketplace sellers understand the value of global, unique, persistent product identification. The main areas of focus will be the existence of GTIN duplicates (where one product is associated with multiple GTINs), and GTIN overuse (when one GTIN is associated with more than one product). Both of these scenarios create catalogue issues that can ultimately result in poor consumer experiences.

In addition to working on new standards, services and guidelines, we will strive to help marketplaces leverage existing GS1 standards so they can reduce operational costs, meet the growing requirements of national and international regulations, and streamline logistics and fulfilment processes.

Finally, we aim to allow marketplaces to expand their usage of standards to create new opportunities and new ways to support their sellers — for example, by enabling sustainability and circular economy initiatives; or by providing the means for social commerce actions.

GS1 in Construction

We believe that GS1 can be the leading source of open, globally unique, persistent, and interoperable standards for identification in construction.

In the Construction Sector, GS1 Ireland are active participants in the NSAI Building Information Modelling standards committee, the Construction IT Alliance (CitA) and, internationally in the Digital Supply Chain in Built Environment (DSCiBE) workgroup – a joint initiative with buildingSMART International.

GS1 Ireland is one of the eight members of the Construction Centre of Excellence which gives us access to resources in other countries. Some of these are more advanced in looking at identification standards and have adopted and mandated the GS1 Trade Item Number are a primary identifier. We want to ensure that the sector in Ireland is made aware of and can take advantage of this work.

We made presentations about our work at GS1 Industry & Standards, GS1 in Europe, the Causeway Network, Construction IT Alliance (CitA), Digital Supply Chain in Built Environment (DSCiBE) workgroup with buildingSMART International and to members and industry groups in Ireland. We produced a number of case studies and educational videos which have been widely shared.

In 2021 we began participating in the ISO standards development committee and associated workgroup on Automatic Identification Capture in Industrial Construction. This will develop standards for tagging and scanning concrete and steel construction elements and is due to complete its work in 2023.

Together with our Platinum Solution Provider Partner, Fexillon (formerly IFS), and some of our members, we submitted proposals for use cases as part of the Build Digital Project. We are now looking forward to participating in the project and showing how our standards can accelerate the digitalisation of the sector in Ireland in order to achieve the project's objectives and the targets set for "Project Ireland 2040".

We are also actively involved, with Fexillon, in the buildingSMART initiative to develop standards in the Facilities Management sector using openBIM.

We are continuing to build our membership and augment the content of our Lean & Green programme. This assists companies in reducing their carbon emissions while getting recognition for their efforts and demonstrating cost benefits.

Looking ahead at 2022

Apart from continuing the above initiatives into 2022, we are embarking on the first year of our new 3-year strategy. For the Construction Sector our three goals are:

1. Identification: to raise awareness among all stakeholders of the commercial, traceability and sustainability benefits of a "verified GTIN". Our goal is to become the preferred source of Identification Standards for the Construction Sector in Ireland. Without identification, the sector will not be able to fully digitalise. GS1's standards for identification surpass anything else available. They are open, global, interoperable and persistent.

2. Enable and Connect Verified Data: to help members realise the business and end-user benefits of capturing and sharing accurate, complete, and verified, digital product data through the use of our integrated digital solutions, including Barcode Manager, Verified by GS1, the Global Registry Platform, a new GLN Registry, GS1 Digital Link, and our traceability and sustainability solutions which will be of enormous benefit in construction – as they hare in other sectors.

3. Empower end-users through a seamless digital product data experience: to ais stakeholders to discover, identify, track and trace products across the supply chain. GS1 will be a strong partner in sustainability, helping industry to meet regulatory requirements arising from the EU, UK and US Green Deals.

Our plan for 2022 incorporates these goals, to build on what has already been achieved – promising a busy and rewarding 2022.

GS1 in Healthcare

HSE National Immunisation Office wins 'IT Project of the Year' at the CIO & IT Leaders Awards (March 2022)

We imagine a world where global standards enable optimal healthcare delivery to benefit patients. Our vision gained a sense of urgency during this year of unprecedented healthcare challenges for the world's population.

2021 was the year of the Covid-19 vaccine and a time when we saw society re-emerging to a new world. For this year's healthcare update, we are focusing the report on GS1 Ireland's response in supporting the HSE to rollout the COVID-19 vaccine safely and efficiently across Ireland. This was a unique opportunity for GS1 Ireland to collaborate with the HSE National Immunisation Office to develop and 'design-in' the GS1 traceability standards to track the Covid-19 vaccine. The following report showcases the excellent work done by all involved.

In parallel, GS1 Ireland was also invited to advise Deloitte and the HSE on their solution, Samplepath to track the Covid-19 tests from the test centres to the laboratories. GS1 Ireland provided a barcoded label specification which the team 'designed-in' to the solution. GS1 Ireland also printed the labels for distribution to all the Covid-19 test centres often with very tight timelines due to the speed with which the

centres needed to increase capacity during critical testing phases.

Further to this, the healthcare team spoke and exhibited at several virtual and in-person events during the year. Some highlights are noted as follows: In February, Siobhain Duggan chaired a panel discussion on 'the importance of international standards and innovation in vaccine rollout' at the Future Health Summit. In March, our global office colleagues at GS1 Healthcare ran the 2nd Edition of the Executive Dialogue on 'Securing Trust in the global Covid-19 supply chain'. We would like to extend our thanks to Suzanne McDonald, Health & Social Care Lead at Deloitte and board member of GS1

> **"** *"The feedback on TrackVax from the Senior Management Teams and the High Level Taskforce has been really positive in terms of enabling visibility of vaccine usage and it has been recognised that TrackVax has made a significant contribution to the efficient rollout of the COVID-19 vaccinations across Ireland."* **Dr. Lucy Jessop, Director of Public Health, HSE National Immunisation Office**

Ireland who moderated the session which was held online and attended by over 800 delegates from around the world. Siobhain also presented the case study on the tracking of the COVID-19 vaccine in Ireland as part of the Executive Dialogue. John Swords, National Director for Procurement, HSE and Board member of GS1 Ireland spoke at a number of national healthcare events and public procurement conferences where he highlighted the importance of GS1 standards for barcoding and traceability to support improved patient safety and visibility of data. In September, Siobhain chaired the very well attended virtual Smart Health Summit which brought together over 30 speakers including 6 live panel discussions with a focus on the future of healthcare and the role of technology.

Above is a summary of the work completed by the GS1 Ireland healthcare team during 2021. It was a very busy and intense year as the team worked with the HSE and other stakeholders to advise on the rollout of the Covid-19 vaccine. This ultimately resulted in the team developing, co-designing, and implementing a national pharmacy system for the tracking of the Covid-19 vaccine. GS1 Ireland is proud to have been in a position to support the HSE and to provide our unique expertise in 'designing-in' traceability standards to make the delivery of patient care safer and more efficient.

An extract from the case study is included here in the Annual Review. To view the full case study and video please go to **https://www.gs1ie.org/healthcare/resources/case-studies/**

Healthcare Case Study Extract

Pandemic response: Keeping track of the COVID-19 Vaccine in the Centralised Vaccination Clinics (CVCs)

The Challenge

As COVID-19 vaccines became available, Ireland's Health Service Executive (HSE) needed an efficient and effective way of receiving, administering, tracking and reporting vaccinations across its more than 40 Centralised Vaccination Clinics (CVCs). It was important for the HSE's National Immunisation Office (NIO) that no dose was wasted and that batches of vaccine could be tracked to the point of vaccination.

Approach

The HSE in collaboration with GS1 Ireland adopted a GS1 standards-based approach for the identification and tracking of vaccines to the point of vaccination. Following an intensive design phase with the HSE project team, two software applications were developed: ScanVax and TrackVax. ScanVax was installed on over 1,000 PCs across the country to allow for the receipt of vaccines. By scanning the barcode on each of the vaccine boxes, vaccine information is then uploaded to the national vaccine administration system. This means that vaccinators can select the correct batch when administering the vaccine. TrackVax has been installed in all CVCs across the country. This allows the CVC teams to identify, label, track and report on the vaccines in their centres, allowing a much easier vaccine reconciliation process locally and nationally. Both solutions are provided by GS1 Ireland.

Background

Over the last 15 years, the HSE has worked with GS1 Ireland to implement traceability standards in areas such as National Haemophilia track and trace, National Instrument and Endoscope track and trace and the development of the Health Directory, which assigns GS1 identifiers to locations, people, assets and more. These identifiers all played a role in the establishment of the national vaccine administration system as identifiers were required for the people being vaccinated and the locations where the vaccination clinics were operating. Additionally, GS1 identifiers were assigned to staff using TrackVax and in some cases to boxes of vaccines to identify smaller pack sizes. As a result of the EU's Falsified Medicines Directive (FMD), manufacturers of prescription medicines are required to assign a two-dimensional (2D) DataMatrix barcode on the secondary package of the product, which means traceability data can be captured in one scan. The barcode has four data elements: the Global Trade Item Number® (GTIN®), batch, expiry date and serial number. Although some of the vaccines didn't have a serial number due to a derogation for COVID-19 vaccines, which presented additional challenges in managing vaccines in the clinics.
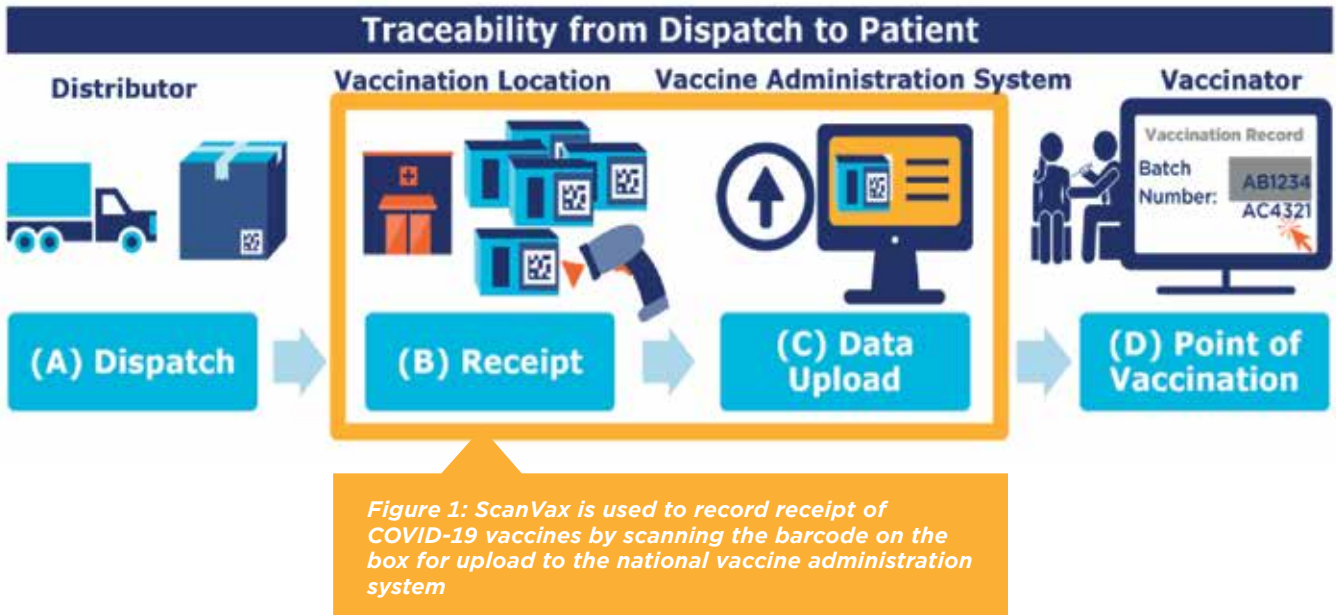
> "History tells us that pandemics can last up to four years, and Ireland is now reopening society after 18 months. In order to do this, it has been critical that we have a safe and efficient vaccination programme.
>
> TrackVax has been instrumental in enabling a high level of quality assurance and traceability of the vaccine to every citizen. At our peak we were vaccinating 8 clients per minute, we couldn't have done that without TrackVax." **Joan Peppard, Pharmacy Vaccination lead Dublin Mid-Leinster, HSE**

The HSE National Immunisation Office wins 'IT Project of the Year' at the CIO & IT Leaders Awards (March 2022). The award recognises the hard work and commitment of all those involved in the development and implementation of ScanVax and TrackVax; supporting the safe and effective rollout of the Covid-19 vaccine in Ireland."

Pictured are L to R:
Joseph McManus HSE, Fionnuala King, HSE, Denis O'Brien GS1 Ireland, Amy Colgan HSE, Martin Wickham HSE, Wayne Leitch iQuest, Siobhain Duggan GS1 Ireland, Kerry Ryder HSE, John Swords HSE (GS1 Ireland Board Member), Mariangela Toma HSE, Mike Byrne GS1 Ireland, Amanda Creane GS1 Ireland, Muriel Pate HSE.

Traceability from Dispatch to Patient

Distributor → (A) Dispatch

Vaccination Location → (B) Receipt

Vaccine Administration System → (C) Data Upload

Vaccinator → (D) Point of Vaccination

Vaccination Record
Batch Number: AB1234 AC4321

Figure 1: ScanVax is used to record receipt of COVID-19 vaccines by scanning the barcode on the box for upload to the national vaccine administration system

Looking forward

The pandemic and urgent need for mass vaccinations helped to drive the call for standardisation in how the vaccines were identified, scanned, administered and tracked. By "designing in" GS1 standards from the start, HSE and GS1 Ireland were able to act quickly and then monitor progress over time.

TrackVax has been operational since 3 March 2021. The software has enabled the tracking and management of over 4 million vaccine doses, as of December 2021, or nearly 50% of Ireland's vaccination programme. TrackVax has been widely accepted across CVCs and has delivered value to the HSE through medicine safety, vaccine tracking, operational efficiency and programme integrity.

The TrackVax governance team recognises TrackVax using barcode scanning right to the point of vaccination as an important foundation for the future management of vaccines across all vaccination centres, both large and small.

The use of GS1 Traceability standards enable the tracking of vaccine type, batch and expiry date in one scan. This forms a working model for how traceability can be applied to many areas of care across the HSE.

While the benefits accrue during mass vaccination sites, further investigation is required to find ways to bring these benefits to smaller sites, such as nursing homes and general practitioners to enable end-to-end vaccine tracking and efficient, safe vaccine record creation through scanning barcodes at point of care. The next step is the development of a mobile app to facilitate the tracking of vaccines in the community based on a simpler version of TrackVax.

> "It was clear from early in the CVC design stage, that the ambitious vision for the scale of vaccination in the CVCs required a comprehensive in-CVC vaccine tracking tool to support a standardised medicines management process. Identification and tracking of vaccine at vial level enabled vaccine stewardship. Articulating this need was crucial for the successful approval of the business case for the development and rollout of TrackVax."
> **Fionnuala King, Chief Pharmacist, Acute Hospitals Drug Management Programme, HSE Acute Operations**

COVID-19 vaccines: Gaining efficiencies in special handling processes

GS1 Ireland would like to extend The COVID-19 vaccines, based on the mRNA technology, are fragile and require special handling to ensure they maintain their effectiveness.

For the Pfizer- BioNTech vaccine, on removal from the ULT freezer to storage between +2°C and +8°C, the expiry date must change and a "use before" date and time of 120 hours needed to be assigned to the product prior to distribution. This now has been increased to 31 days. For the Moderna vaccine, the expiry date changes on arrival at the vaccination centres and requires a new label "use before" for storage between +2°C and +8°C, which is assigned on receipt into TrackVax.

Consider the process for the Pfizer-BioNTech vaccine. There is one distributor that delivers the National Cold Chain Service (NCCS) for the entire country. All vaccines arriving in Ireland are brought to a central warehouse in Dublin. Each package or box of Pfizer-BioNTech vaccines, containing 195 vials or 1,170 doses, is marked with a 2D DataMatrix barcode as part of the requirements for the EU's FMD regulation. The boxes are stored in freezers at the designated temperature.

To prepare the vials for distribution to vaccination sites, the vials are repackaged in smaller pack sizes with the exact number needed for these sites (e.g., nursing homes). From the distribution site, the packaged vials of vaccines are transported in refrigerated vans to more than 600 locations throughout Ireland. One of the first recommendations by the GS1 Ireland team was the design of a standardised, full box and break-pack label—for the secondary packages that contain the vaccine's unique identifier— the GTIN, its batch/lot number, and the revised expiry date and time based on the re-packaging activity—encoded in a 2D DataMatrix barcode. The "use before" date and time information was needed for the Pfizer-BioNTech and Moderna vaccines as their remaining shelf life reduced once stored between +2°C and +8°C.

Enabling realtime, data-based problem solving and decision making

Consider that one large CVC was experiencing a decrease in yield for the Pfizer-BioNTech vaccine. They immediately alerted the HSE's NIO. Using TrackVax, the team was able to check the yields for other sites and quickly identified that this decline was also happening in other CVCs. Upon closer examination, the HSE deduced very quickly that it was due to the type of syringes being used. Because the HSE had this data readily available, it immediately contacted the procurement team and arranged for the appropriate syringes to be provided to the sites to optimise the yield per vial. The data from TrackVax facilitated quick decision making.

The data wouldn't have been available using a paper-based system, and it is estimated that about 75,000 doses were saved due to this one change.

Pictured are: Siobhain Duggan, GS1 Ireland and John Swords, HSE (GS1 Ireland Board Member) at the Future Health Summit (Sept. 2021)

"The feedback on TrackVax from the Senior Management Teams and the High Level Taskforce has been really positive in terms of enabling visibility of vaccine usage and it has been recognised that TrackVax has made a significant contribution to the efficient rollout of the COVID-19 vaccinations across Ireland." **Dr. Lucy Jessop, Director of Public Health, HSE National Immunisation Office**

TrackVax Project Governance & Project Management Team

Lucy Jessop,
Director of Public Health,
NIO

Caralyn Horne,
National HSE Vaccination
Programme

Cliona Kiersey,
Chief Pharmacist,
NIO

Kerry Ryder,
ICT General Manager,
NIO

Joseph McManus,
TrackVax Project Manager,
HSE

Muriel Pate,
Medication Safety Specialist
Pharmacist, HSE Quality and
Patient Safety Directorate

Noreen Noonan,
ICT Delivery Director For
Public Health, OoCIO, HSE

Fionnuala King,
Chief Pharmacist, Acute Hospitals
Drug Management Programme,
HSE Acute Operations

Mariangela Toma,
Chief II Pharmacist, NIO

Martin Wickham,
Covid-19 SO Support Lead,
OoCIO, HSE

Joan Peppard,
Pharmacy Vaccination Lead
Dublin Mid-Leinster, HSE

Justin McGoldrick,
Senior Project Manager,
OoCIO, HSE

Amy Colgan,
Business & Administration
Support, NIO

Aishwarya Vivekkumar,
Grade IV - ICT (Graduate
Programme), NIO

Denis O'Brien,
Director of Standards and
Solutions, GS1 Ireland

Amanda Creane,
Healthcare Manager, GS1
Ireland

Siobhain Duggan,
Director of Healthcare and
Innovation, GS1 Ireland

Thank you

GS1 Ireland would like to extend a note of thanks to everyone from the many organisations both within the HSE and externally who have contributed to the successful implementation of the COVID-19 vaccine traceability programme including: National Immunisation Office, Medicines Management Working Group, Office of the Chief Information Officer, Rotunda Hospital, Procurement, COVID-19 Vaccination planning and operations teams and all the staff in the CVCs.

Food & Beverage Case Study

Airfield Estate

Using GS1 standards to improve traceability, reduce waste and increase consumer trust

Challenge

Airfield Estate is a farm located in suburban Dublin, Ireland and through its work aims to inspire people to make better food choices through education and awareness. Food waste, sustainable production and traceability are all identified concerns of customers locally and nationally. Airfield recognised an opportunity to respond to those consumer demands for greater transparency through the provision of easily accessible information about the origin and production of their unique Jersey cow milk.

Solution

To illustrate the journey of a food product, Airfield Estate introduced a QR code and a GS1 DataMatrix barcode on its milk bottle labels. Through the use of GS1 data standards, combined with the fTRACE traceability platform, Airfield can provide batch-specific traceability information to their customers in real-time.

Benefits

The solution has delivered benefits for both Airfield Estate and its consumers:

- More efficient labelling of milk in their production facility
- Better informed consumers with easy access to all traceability information by scanning the QR code on the label
- Allowing for future enhancements at Airfield Estate:
  - Faster, more accurate stock visibility and management in the farm shop by scanning the barcode containing the expiry date
  - Prevention of food waste in the shop through more efficient stock management
  - Increased consumer safety with faster product recalls possible through the use of the data in the GS1 DataMatrix barcode.

The digital journey of milk

Airfield Estate wanted to educate customers about the journey of milk from cow-to-consumer, and recognised that the provision of digital product and traceability information could help achieve this goal.

Airfield milk is produced, pasteurised, bottled and sold onsite, creating a closed loop production and sales environment. With each day's production, a vast array of product data

Airfield Estate intelligent label

QR code linking fTrace batch level traceability data

GS1 DataMatrix with the following data embedded:
- GTIN
- Expiry date / Use by date
- Batch number

The following data is encoded in the GS1 DataMatrix barcode:

- GS1 GTIN, that identifies each milk product type

- Expiry date to enable the improved manage- ment of product along the supply chain and reduce waste

- Batch number to enable traceability and recall functionalities

is recorded such as the location, product ID, batch number, milking and bottling dates and expiry date.

Key data including the GS1 Global Trade Item Number® (GTIN®) for product identification plus the batch number and expiry date are encoded in the GS1 DataMatrix barcode that is printed on the milk bottle label.

This barcode can be scanned throughout the Airfield Estate to record product movements and to manage inventory and stock rotation.

Additionally, this data is uploaded to the fTRACE traceability platform to make the

information publicly accessible to consumers via an easy-to-use web page. Consumers can access the information for their bottle of milk by scanning the QR code on the milk bottle label with their smartphone. On the fTRACE website, consumers can explore a wide array of information about the Airfield Estate, its history, as well as details of the full milk production process, the Jersey cow herd and even Brian, the Airfield farmer.

Improved consumer trust and safety
The pilot project at Airfield Estate has successfully demonstrated the ability of a small-scale production facility to incorporate intelligent barcodes into its product labelling process.

- Consumers can now access dynamic traceability information about the milk they buy in the Airfield farm shop by scanning the QR code on the label with their smartphone.

- Consumer safety is improved through efficient product recall processes, should they be needed, utilising the batch-level information stored in the GS1 DataMatrix barcode.

Next steps
The next step in the project will involve engaging with the provider of the point-of-sale (PoS) and inventory management systems in Airfield Estate's shop and restaurant, to utilise the embedded product data to reduce food waste, to facilitate product recalls and to further improve stock management and visibility.
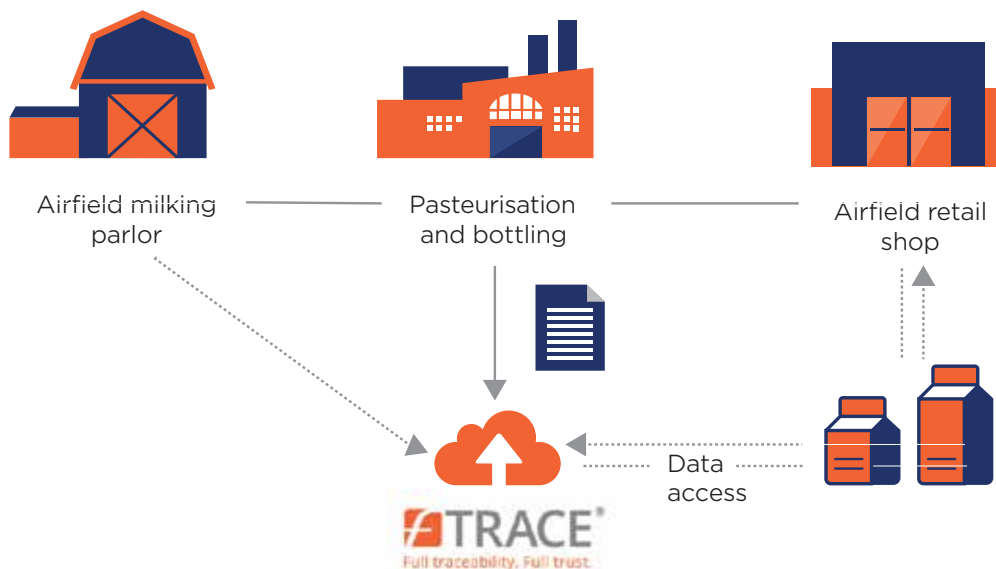
As consumer level food waste is a major issue across the retail industry, GS1 Ireland and Airfield will engage with consumer-facing app providers to utilise the data in the milk label's GS1 DataMatrix barcode, thus developing a best practice example for engagement with consumers on topics such as food waste and food safety through product recall functions.

Did you know?

You can scan the QR code on Airfield Estate's Jersey milk to find full details about it's origin

"Having the 2D [GS1 DataMatrix] barcode include the expiration date on the milk saves me an entire step in labelling. I used to have to put two labels on each milk carton; now it's just one. It saves me time and money!"
Brian Farrell, Airfield Estate Farmer

A working group will also be established to discuss the pilot project at Airfield with local stakeholders, and to communicate the lessons learned from its implementation. These lessons may be used as the basis for future projects utilising intelligent barcodes and dynamic product data in the food industry for the benefit of all stakeholders, including retailers, manufacturers, regulators and consumers.

Integrating milk product data throughout the cow-to-consumer process

Airfield milking parlor — Pasteurisation and bottling — Airfield retail shop

Data access

TRACE
Full traceability. Full trust.

Consumer Goods Case Study

New frontiers with Near Field Communications (NFC)

As a global identification standards organization, GS1 drives industry collaboration by creating a foundation for emerging technologies that can improve security, visibility, interoperability and trust between business partners. Among the widely used standards, the GS1 barcodes are the most recognisable examples of a GS1 data carrier.

In order to leverage electronic data carriers, GS1 has since established the Electronic Product Code (EPC) standard. This allows the use of the GS1 numbering system in Ultra High Frequency (UHF) passive Radio Frequency Identification (RFID) based applications.

With the ongoing development of other Radio Frequent (RF) data carriers and technology, GS1 should incorporate these modern technologies to create a future of "GS1 Anywhere". Near-Field Communication (NFC) tags could represent one element of an approach that drives toward the ubiquity of GS1 identification.

NFC systems operate in a High Frequency (HF, 13.56 MHz) environment. Compared to UHF passive technology, NFC has a limited read range, which means that NFC devices must be in close proximity to be read. But NFC has many other advantages and is widely used today, most frequently in secure communications, access controls, and contactless payments.

According to NFC Data Exchange Format (NDEF), developed by NFC Forum, NFC tags have reserved headers to indicate that either EPC schemes or URLs (GS1 Digital Link URIs) are encoded in its memory bank. One of the main advantages of NFC is that nearly all smartphones are equipped with NFC technology so that end users can access NFC tags to capture or exchange data. Leveraging this feature would help extend GS1 and EPC Standards into the telecommunications territory.

Additionally, nearly all major UHF RFID chip manufacturers also have NFC solutions. Encoding GS1 identification keys and attributes into NFC Tags could be of interest for many sectors. For example, encoding GSRN into the badge of the Healthcare staff or patients could prevent medication dispensing errors.

For consumer engagement purposes, using an NFC-enabled smartphone to read an SGTIN in GS1 Digital Link URI format can provide a host of valuable information about a product and its journey, ranging from sustainability and circular economy, product authentication, after sale services, warranty, to loyalty programs and beyond.

With the ubiquity of the technology in consumer devices and industrial contexts, NFC technology is an opportunity for GS1 and EPC Standards to lead the HF market.

NFC Use Case in Ireland

GS1 Ireland collaborated with DMF System and the Gaelic Athletic Association (GAA) to deliver the solution of embedding NFC tags with SGTIN into sliotars. A sliotar is the Gaelic language name for a ball used in the field game of Hurling.

In addition to allowing the administrators of the game of Hurling to authenticate the sliotars easily and quickly, the use of NFC tags also allows the Retailer (or Reseller) to authenticate what they are buying from the distributor/manufacturer, thus providing for consistency in the supply chain.

The GAA partnered with Declan Fitzgerald from DMF Systems to create the specification for an NFC tag using GS1 identification standards (a Serialized Global Trade Item Number (SGTIN). DMF subsequently designed the mobile phone app and data handling infrastructure. They also partnered with sliotar manufacturers Green Fields and O'Neills to help with sourcing appropriate tagging technology and sliotar design.

From the hurling performance perspective, due to the smaller size of the NFC tag, there would be no interference with the playability and performance of the ball. For the GAA, the NFC tag still had been readable after multiple high impact usage. For GS1, the identifier could be used on another Radio Frequency Data Carrier besides UHF.

https://www.gs1ie.org/blog/2020/the-story-behind-hurling-s-new-yellow-sliotar.html
https://dmfsystems.ie/digital-sliotar-nfc/

> **"** *"The GAA's key requirements for traceability were to ensure it knew who manufactured the sliotar, where it was made, that it could not be counterfeited and to ensure that referees and the general public could check using their mobile phones if they were using or buying an official GAA sliotar"*
> **Pat Daly, GAA Director of Games Development and Research, responsible for implementing the Smart Sliotar project**

Global Update 2021

The barcode turns 50

Celebrating 50 years of digitalisation in commerce and calling for industry collaboration on next-generation barcodes

50 years ago, on 31 March 1971, the modern economy was born. That was the day when leaders from the biggest names in commerce came together and developed the Global Trade Item Number, known as the "GTIN".

The GTIN is the number behind the barcode, the most important supply chain standard in history. Today, the barcode is scanned over six billion times every day and remains one of the most trusted symbols in the world.

 It is no exaggeration to say that the development of the GTIN set the stage for global, digitalised commerce. This really is one of the great, untold stories in the history of international business, a remarkable coming together of fierce competitors to solve real business challenges.

Half a century ago, every product in every supermarket around the world needed its own individual price sticker. That took time, cost money, and was a source of inefficiencies and errors.

Back in 1971 a group of business competitors joined together to remake global commerce for the better. They agreed to collaborate on a way to identify products: the GTIN. They knew the creation of this number was just the beginning and already then, they imagined it could be used beyond the grocery store checkout counter—from warehouses to boardrooms and everywhere in between.

Today, with a need for much more information about products, industries are meeting the same challenges that they faced 50 years ago: a need to collaborate, to think big and to innovate.

GS1 standards such as the barcode continue to help make the complexity of modern business more simple, efficient and secure, simplifying all kinds of supply chain processes in almost every sector all around the world. However, as consumers demand more and better product information, it is time to bring barcodes to the next level.

Developments towards next generation barcodes, which can hold vastly more information, should be used to empower consumers and patients alike with trusted information and reshape global commerce for a new century. Their use, for example, can tell consumers if a product contains allergens, if it is organic, and information on its carbon footprint. Ultimately, this provides all consumers with a greater level of trust and loyalty relating to the products they buy and use.

Building a strong foundation for the future of data sharing

We see the GS1 Registry Platform as the foundation for a vast ecosystem of data and services that will allow business partners to access trusted information about any product, location or entity that has a GS1 identifier. To support the growth of e-commerce and to provide industry and consumers with the data they want and need, GS1 has been working for two years to drastically simplify product identification, verification and data sharing for brand owners, retailers and other product data users.

Our vision is to ensure every product, location and entity everywhere has its own unique persistent identifier and basic data attributes - allocated according to GS1 standards - and that this information is globally shareable and verifiable by trading partners in both the physical and digital worlds.

We have already brought the foundation of that vision to life by launching the GS1 Registry Platform, a global registry containing just enough data to verify any product's identity; and by creating Verified by GS1 as a way to access that data.

Verified by GS1

Verified by GS1 is the service that allows data recipients - such as retailers, marketplaces, solution providers and even government authorities - to check and validate the identity of a product or company by querying the GS1 Registry Platform. It's where GS1 member companies go to be sure a product is what they think it is.

"Consumers want to know everything about a product they buy or a service they experience: where it comes from, if it is good for their health, if it is safe for the environment. To strengthen the trust of consumers, we must offer increased transparency by providing more and more trusted, accurate information. Thanks to Verified by GS1, retailers, manufacturers and e-retailers can provide the right data to enable the transparency demanded by consumers"
Mike Byrne, CEO, GS1 Ireland

Product ID

GTIN: **9504002100016**

Brand name

Product description

Product image URL

Global product category

Net content & unit of measure

Country of sale

Looking forward

We are only at the beginning of our journey. Our longer-term vision is to see the GS1 Registry Platform become a trusted node in a vast ecosystem of data; an essential reference point for quality, authoritative data about products, locations, entities and indeed anything with a GS1 identifier, anywhere in the world.

We envision the GS1 Registry Platform as an essential reference point for authoritative data about products, locations and entities, and a central node in the vast ecosystem of data needed by industry.

A new dimension in barcodes

We are taking the first steps in an ambitious long-term project to transition both product packaging and point-of-sale scanners from legacy barcodes to smarter, more capable, next-generation barcodes.

In 1971, a group of people from the retail industry agreed to collaborate, think big and innovate to find a way to globally and uniquely identify products. The result of their work was the universal product code (U.P.C.), which later became the GS1 Global Trade Item Number, or GTIN. A full fifty years later, the "beep" you hear at the supermarket checkout is still the sound of a GTIN being scanned.

However, consumers today have new and different expectations. They want to know more information about products they buy. That has led to a significant increase in the number of different barcodes on product packaging, causing confusion and wasting precious label space.

GS1 is leading with industry toward a better solution: modern barcodes, such as QR codes and GS1 DataMatrix codes, that can hold more information than traditional barcodes. One scan of these next-generation barcodes can connect people up and down the supply chain to the information they need for inventory management, traceability programmes, sustainability initiatives, consumer engagement actions and more.

A next-generation barcode can connect a consumer to a webpage, alert the cashier that a scanned product is past its expiry date, provide traceability information about a product's provenance and more.

The global adoption of these "2D" barcodes will unlock a new dimension of capabilities and enable a variety of efficiencies. Unlike legacy barcodes that primarily served the needs of retailers, the new barcodes offer benefits for everyone, from manufacturers to retailers to logistics providers, as well as the solution partners that serve industry—and of course consumers.

For more information on the new "intelligent" barcodes please contact our Industry Engagement team.

"Today's retail business is about trust, and to build trust, you need product traceability and product authenticity. GS1, the global language of business, addresses the issues of inventory visibility, data integrity, product traceability and product authenticity across all supply chain channels. By so doing, GS1 standards help drive trust across all retail channels – instore, online, and multichannel."
Gerry Boylan, Diageo and Chair GS1 Ireland

Key industries served
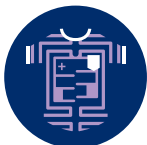
 Healthcare

 Retail

 Marketplaces

 General Merchandise
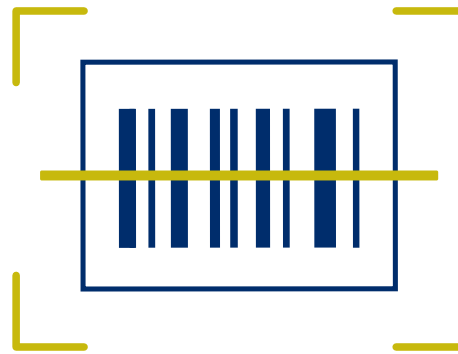
 Apparel

 CPG

 Fresh Foods

 Transport & Logistics

 Foodservice

 Technical Industries

6 billion
GS1 barcodes scanned daily

More than 100 million
products carry GS1 barcodes

More than 2 million
companies use GS1 standards

GS1 Ireland's Strategic Plan 2022 - 2024

Empowering Consumers, Saving Lives

Our Annual Review and Financial Statements for 2021 demonstrate that our last strategic plan (2019 - 2021) served us well as an organisation and helped us to successfully navigate the effects of the global COVID-19 pandemic. Putting our members and their needs at the heart of our goals and objectives was central to this achievement. That is why, in creating our plan for the next three years, we chose to build on the progress of the last strategy and to keep Member Engagement as our first strategic pillar.

The impact of the pandemic on global supply chains, combined with the evolving regulatory environment, has thrown a spotlight on the ever-increasing need for data availability and visibility, and on product traceability and authentication. We believe there is a fundamental role for GS1 identifiers and standards-based services and solutions to help industry and public sector organisation's alike to meet these new challenges and to progress and grow.

Over the next three years we will focus on:

1. **Empowering Consumers, Saving Lives:** We believe in using our resources to deliver benefit to members and wider society. We have therefore chosen a theme of "GS1 standards: Empowering Consumers, Saving Lives" for our next three-year strategy.

2. **Sustainable Growth:** GS1 Ireland will endeavour to sustainably grow its membership and income by offering innovative and trusted standards, services and solutions that best meet our core sectors' needs.

3. **Organisational Capability:** As a not-for-profit membership organisation we reinvest any surpluses in activities which support our members and deliver to our core purpose.

I would like to express my thanks to the GS1 Ireland Board of Directors for their guidance and insight throughout the development of this new plan, and to my colleagues on the GS1 Executive for their energy and commitment to deliver on its ambitions.

Mike Byrne, CEO GS1 Ireland

Our Vision

A better world for everyone through the full adoption of GS1 standards

We help businesses to sell more and create efficiencies in their supply chains. We help consumers by increasing transparency and trust in products and services. We help organisations to save money, save lives, and to be more efficient.

Our Mission

We empower organisations and consumers to benefit from improved efficiency, safety, transparency, security and sustainability through the exchange of trusted data.

We create a common foundation for organisations and consumers to identify, capture, share and use vital information about products, locations, assets and more.

Our Beliefs

We believe in the power of global standards to transform the way we work and live.

We are neutral and not-for-profit; local and global; inclusive and collaborative.

Our Core Values

Collaborative:
GS1 Ireland is collaborative by design, bringing together industry players to find solutions for shared concerns.

Trust & integrity:
As a neutral, independent body, GS1 Ireland is a trusted source of insights, valued for the integrity demonstrated by its team in support of members and society.

Forward thinking: Forward thinking, standards-based innovative proto-typing is at the heart of GS1 Ireland. We strive to tackle the issues of today and help understand the challenges of tomorrow.

Our Guiding Principles

People Centric:
Our strategy will be people-centric. We will put the informed, protected citizen at the heart of everything we do.

Key Sector Focused:
Our plan provides a strategic framework within which we can make choices about where to focus future activities and resources in the key sectors of Retail/CPG, Healthcare and Construction.

Global and Local:
We will leverage both the global and local suite of GS1 standards & solutions. We will play to our strengths as a global standards body but make informed choices based on local trends and member needs.

Our Strategic Pillars

Member Engagement

**Build relationships with members to understand and answer their needs & challenges.**

Deepen our engagement through targeted, multi- channel interactions with our network of members across key Sectors.

Sectors

Position GS1 Ireland as the authority on traceability, sustainability and digital commerce, with growth plans for our priority sectors

- CPG
- Healthcare
- Construction
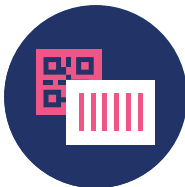
Standards, Services & Solutions

Goal: To achieve Growth and to Accelerate Standards Adoption through the Expansion of the Services and Solutions we offer, in line with identified current and future industry & consumer needs.

- **Standards:** GS1 Digital Link; eCommerce standards, Identification & barcode symbol standards
- **Services:** Sustainability; Training, Professional & Advisory Services,
- **Solutions:** Barcode Manager, Verified by GS1, Traceability/Track & Trace, Inventory and Asset Management and Labelling Solutions;

Organisational Capability

Enable GS1 Ireland to thrive and grow with
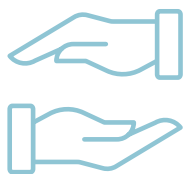
- robust, secure systems
- efficient processes
- skilled and motivated staff
- strong finances & governance

The Global Language of Business

115 local Member Organisations

Neutral & not-for-profit	User-driven & governed
Global & local	Inclusive & collaborative

GS1 believes in the power of standards to transform the way we work and live.

GS1 (Global Standards 1 (Ireland))

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Directors' Report and Financial Statements
for the year ended 31 December 2021
(A company limited by guarantee and not having a share capital)

Report and Financial Statements 2021

Contents

Directors and Other Information

Directors
Gerry Boylan
David Codd
Fergal Wall
James Cummins
Jim Copeland
John Swords
Liam Hartnett
Michael Kelly
Pat Tracey
PJ Timmins
Sean Nolan
Suzanne McDonald
Therese O'Rourke
Zandra Montgomery

Company secretary
Mike Byrne

Registered Number
404327

Registered Office
2nd Floor
The Merrion Centre
Nutley Lane
Dublin 4

Independent Auditors
Mazars
Chartered Accountants &
Statutory Audit Firm
Harcourt Centre
Block 3
Harcourt Road
Dublin 2

Bankers
Bank of Ireland
College Green,
Dublin 2

Solicitors
Mason, Hayes and Curran
6th Floor South Bank House
Barrow Street
Dublin 4

Directors' Report

The directors present their annual report and the audited financial statements for the year ended 31 December 2021.

1. Principal activities

The mission of the company is to support organisations in their efforts to improve supply and demand chain efficiency. The principal activities of the company are the licensing of global company prefixes and global location numbers to identify products and locations for the purpose of automatic data capture and for EDI. The GS1 global standards cover Bar Coding, eCommerce, Master Data Management and EPC/RFID. The company also provides a range of relevant professional and advisory services for its user organisations, including education, training, traceability solutions, and verification services.

2. Results and dividends

Total income for the year ended 31 December 2021 was €2,417,191 (2020: €2,122,053).

The company is a not for profit company and clause 5 of the Constitution indicates that distributions to the members will only arise upon the winding up or dissolution of the company and after the satisfaction of all debts and liabilities.

3. Directors

The directors who served during the year were:
Gerry Boylan
David Codd
Fergal Wall
James Cummins
Jim Copeland
John Swords
Justin Carton (resigned 17 September 2021)
Liam Hartnett
Michael Kelly
Pat Tracey
PJ Timmins
Richard Boland (resigned 20 November 2021)
Sean Nolan
Suzanne McDonald
Therese O'Rourke (appointed 15 September 2021)
Thomas Shortall (resigned 10 June 2021)
Zandra Montgomery (appointed 11 March 2021)

The election and retirement of directors is in accordance with the Constitution.

The names of the persons who were directors at any time during the year ended 31 December 2021 are set out above. Unless otherwise stated, they all served as directors for the entire year ended on that date. Mike Byrne is the Company Secretary.

4. Directors and secretary and their interests

The company is limited by guarantee and does not have any share capital. Therefore, the directors and secretary who served during the year did not have a beneficial interest in the company.

5. Transactions involving Directors

There were no contracts or arrangements of any significance outside the normal course of business for the organisation in relation to the company's business, or that of related companies, in which the directors or secretary of the company had any interest, as defined in the Companies Act 2014, at any time during the year ended 31 December 2021.

6. Risks and uncertainties

The Board of GS1 Ireland is responsible for the Organisation's risk management framework, which is designed to identify, manage and mitigate potential material risks to the achievement of the GS1 Ireland's strategic and business objectives.

The Board has approved a Risk Appetite Statement as part of its Risk Management Policy which sets out delegated responsibilities and procedures for the management of risk in GS1 Ireland. This Statement informs the internal controls that are maintained in those areas.

The Board regularly reviews the Organisation's Risk Register to ensure that both documented and emerging risks are managed appropriately.

7. Roles & Responsibilities:

The detailed roles and responsibilities assigned as part of the risk management and control framework are summarised below:

Board:

The Board is responsible for the Organisation's Risk Management Policy and for determining its appetite for risk. The Board is also required to report on the annual review of the effectiveness of risk management and internal control systems.

Audit & Risk Committee:

The Audit & Risk Committee is responsible for assisting the Board by taking delegated responsibility for risk identification and assessment and for reviewing the company's risk management and internal control systems and making recommendations to the Board thereon. It fulfils its responsibilities by reviewing relevant reports from the Executive and Auditors. The Chairperson of the Audit & Risk Committee reports to the Board on its activities.

Executive:

The Executive (through the Chief Executive Officer) is required to maintain a comprehensive risk register, which is reviewed and updated regularly for submission and approval by the Audit & Risk Committee and, thereafter, by the Board. Risks are categorised as Strategic (S), Financial (F), Operational (O), and Reputational & Compliance (R) and are rated in terms of Business Impact and Likelihood. The register also includes a description of the consequences of the risk, the ownership of the risk, and an action plan for addressing each risk.

All changes to key risks are documented and declared to the Board by the CEO at each Board Meeting.

8. **Governance and committees**
GS1 Ireland is a Member Organisation of GS1 AISBL and is required to comply with its statutes, code of practice and other relevant agreements as adopted under the General Assembly of GS1. In addition to the Board, which meets four times a year and is responsible for the strategy and overall performance of the organisation, the directors also participate in four committees:

   a. **Operations Committee:**
   The Operations Committee consists of the Chair, Vice Chair and CEO. The committee meets four times a year in advance of the scheduled Board meetings and reviews in detail the Organisation's management accounts, risk register and operational reports.

   b. **Remuneration Committee:**
   The Remuneration Committee consists of the Chair, Vice Chair and one other independent director. The committee meets on average once a year to determine and agree the policy for the remuneration of the company's CEO.

   c. **Nominations Committee:**
   The Nominations Committee consists of the Chair, Vice Chair and the CEO. The committee meets on average twice a year and the objectives of the committee are to recommend to the Board individuals suitable for nomination to the Board and to provide the Board with advice on the structure and general composition of the Board.

   d. **Audit and Risk Committee:**
   The Audit and Risk Committee consists of the Vice Chair and two other directors, with the CEO in attendance. The committee meets at least once a year and is responsible for the oversight of the company's audit and control functions. This includes financial reporting and accounting, external audit, regulatory compliance, the effectiveness of the internal control environment and processes, and risk management.

9. **Accounting Records**
The measures taken by the directors to ensure compliance with the requirements of Sections 281 to 285 of the Companies Act 2014 with regard to the keeping of accounting records, the employment of appropriately qualified accounting personnel and the maintenance of computerised accounting systems. The company's accounting records are maintained at the company's registered office at 2nd Floor, The Merrion Centre, Nutley Lane, Dublin 4.

10. **Events since the end of the year**
There have been no significant events affecting the company since the year end.

11. **Future developments**
In Ireland, along with each of the other 115 countries where Organisations have adopted our standards, GS1 is committed to developing and revising standards that best fit 21st century supply chain practices. These include data standards for omni-channel retailing such as GS1 Digital Link, Verified by GS1 (VbG), Global Product Classification and trusted data sharing capabilities via the GS1 Global Registry Platform. In Healthcare, developments are focused on supporting members in their efforts to comply with global healthcare regulatory requirements to identify, track and manage medicines, medical devices and critical assets. Developments are also continuing to enhance awareness of the value of GS1 standards and solutions in new industry sectors such in Construction, and in Financial Services (for Legal Entity Identification).

In the Construction sector, GS1 has created a Centre of Excellence (CoE) to promote its standards & solutions to be used in Building Information Management (BIM), to enable the identification, capturing, sharing and use of data pertaining to locations, assets and products in Construction. As consumers become more and more technology reliant it will equally become imperative for consumers to be able to trust product data and the brands that provide it. In addition to the rollout of the Verified by GS1 service, and the GS1 Digital Link standard, GS1 will ensure its standards are at the heart of new regulatory-led sustainability and circular economy initiatives commencing with the establishment of product passports for batteries.

12. **New solutions and research and development activities**
The core of GS1 Ireland's new Strategic Plan for 2022 to 2024 is to increase the adoption of GS1 standards and solutions by members. In its execution of the Plan, the company will continue to invest in developing for members a range of solutions to support their supply chain needs. For the retail sector this work will include both new standards and solutions, such as Verified by GS1 and new GS1 Global Registry Platforms for GTINs and GLNs and enhancements to existing solutions, such as eLOCATE, fTRACE and Barcode Manager (BCM).

The company will also continue to undertake research and development in applications to support GTIN (barcode) adoption within the Healthcare supply chain in addition to developing standards-based registries for healthcare services and traceability tracking solutions for precious samples and specialist baby feeds.

A key driver of new solutions has also been the opportunity to design, develop and deploy standards-based traceability software solutions for members, particularly in the healthcare sector. Such an opportunity was successfully embraced by Ireland's Health Service Executive (HSE) in the national Covid-19 vaccination programme. As Covid-19 vaccines became available, the HSE

needed an efficient and effective way of receiving, administering, tracking and reporting vaccinations across more than 40 Centralised Vaccination Clinics (CVCs). It was important for the HSE's National Immunisation Office (NIO) that no dose was wasted and that batches of vaccine could be tracked to the point of vaccination. The HSE, in collaboration with GS1 Ireland, adopted a GS1 standards-based approach for the identification and tracking of vaccines to the point of vaccination. Two software applications were developed following an intensive design phase with the HSE project team: ScanVax and TrackVax.

- ScanVax was installed on over 1,800 devices across the country to allow for the receipt of vaccines by HSE pharmacy staff. By scanning the barcode on each vaccine box, the relevant information is then uploaded to the national vaccine administration system. ScanVax thus enables vaccinators to select the correct batch when administering the vaccine.

- TrackVax was installed in all CVCs across the country. It enables the CVC teams to identify, label track and report on the vaccines in their centres, allowing a much easier vaccine reconciliation process locally and nationally.

GS1 Ireland is immensely proud to support the HSE by providing traceability standards enabling a safe and efficient rollout of Covid-19 vaccines across Ireland.

13. **Statement on relevant audit information**
Each of the persons who are directors at the time when this Directors' Report is approved has confirmed that:

- so far as the director is aware, there is no relevant audit information of which the company's auditors are unaware, and

- the director has taken all the steps that ought to have been taken as a director in order to be aware of any relevant audit information and to establish that the company's auditors are aware of that information.

14. **Auditors**
The auditors, Mazars, Chartered Accountants and Statutory Audit Firm, have expressed their willingness to continue in office in accordance with section 383(2) of the Companies Act 2014.

This report was approved by the board and signed on its behalf.

On behalf of the Board

Gerry Boylan	**PJ Timmins**
Director	**Director**
10 March 2022	

Directors' Responsibilities Statement

The directors are responsible for preparing the Directors' Report and the financial statements in accordance with Irish law and regulations.

Irish company law requires the directors to prepare the financial statements for each financial year. Under the law, the directors have elected to prepare the financial statements in accordance with the Companies Act 2014 and Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' .

Under company law, the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the assets, liabilities and financial position of the company as at the financial year end date, of the profit or loss for that financial year and otherwise comply with the Companies Act 2014.

In preparing these financial statements, the directors are required to:

- select suitable accounting policies for the company's financial statements and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether the financial statements have been prepared in accordance with applicable accounting standards, identify those standards, and note the effect and the reasons for any material departure from those standards; and

- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for ensuring that the company keeps or causes to be kept adequate accounting records which correctly explain and record the transactions of the company, enable at any time the assets, liabilities, financial position and profit or loss of the company to be determined with reasonable accuracy, enable them to ensure that the financial statements and Directors' Report comply with the Companies Act 2014 and enable the financial statements to be audited. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the company's website. Legislation in Republic of Ireland governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions. On behalf of the board

On behalf of the Board

Gerry Boylan	**PJ Timmins**
Director	**Director**

10 March 2022

Independent Auditors' Report
to the Members of
GS1 (Global Standards 1 (Ireland))

Report on the audit of the financial statements

Opinion
We have audited the financial statements of GS1 (Global Standards 1 (Ireland)) (the 'company') for the year ended 31 December 2021, which comprise the Statement of Income and Retained Earnings, the Statement of Financial Position, the Statement of Cash Flows and the notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is Irish law and Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland'.

In our opinion, the accompanying :

- give a true and fair view of the assets, liabilities and financial position of the company as at 31 December 2021 and of its surplus for the year then ended;

- have been properly prepared in accordance with Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland'; and

- have been properly prepared in accordance with the requirements of the Companies Act 2014.

Basis for opinion
We conducted our audit in accordance with International Standards on Auditing (Ireland) (ISAs (Ireland)) and applicable law. Our responsibilities under those standards are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the company in accordance with the ethical requirements that are relevant to our audit of financial statements in Ireland, including the Ethical Standard issued by the Irish Auditing and Accounting Supervisory Authority (IAASA), and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern
In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report. in the relevant sections of this report.

Other information
The directors are responsible for the other information. The other information comprises the information included in the Annual report, other than the financial statements and our Auditors' report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2014
In our opinion, based on the work undertaken in the course of the audit, we report that:

- the information given in the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements;

- the directors' report has been prepared in accordance with applicable legal requirements;

- the accounting records of the Company were sufficient to permit the financial statements to be readily and properly audited; and

- the financial statements are in agreement with the accounting records.

We have obtained all the information and explanations which, to the best of our knowledge and belief, are necessary for the purposes of our audit.

Matters on which we are required to report by exception
Based on the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified any material

misstatements in the Directors' Report.

The Companies Act 2014 requires us to report to you if, in our opinion, the disclosures of directors' remuneration and transactions required by sections 305 to 312 of the Act are not made. We have nothing to report in this regard.

Respective responsibilities

Responsibilities of directors
As explained more fully in the Directors' Responsibilities Statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an Auditor's Report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (Ireland) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the IAASA's website at: https://www.iaasa.ie/Publications/Auditing-standards. This description forms part of our Auditor's Report.

The purpose of our audit work and to whom we owe our responsibilities
This report is made solely to the company's members, as a body, in accordance with Section 391 of the Companies Act 2014. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an Auditor's Report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Lorcan Colclough
for and on behalf of
Mazars
Chartered Accountants & Statutory Audit Firm
Harcourt Centre
Block 3
Harcourt Road
Dublin 2
10 March 2022

GS1 (Global Standards 1 (Ireland))

Statement of Income and Retained Earnings

	Note	Year ended 31 December 2021 €	Year ended 31 December 2020 €
Income	5	2,417,191	2,122,053
Expenditure		<2,191,665 >	<2,018,987 >
Operating surplus		225,526	103,066
Interest receivable and similar income	9	989	528
Interest payable and similar charges		<1,504 >	---
Surplus before taxation		225,011	103,594
Taxation	10	<132 >	<122 >
Surplus for the financial year		224,879	103,472
Retained earnings at the beginning of the financial year		2,429,655	2,326,183
Surplus for the financial year		224,879	103,472
Retained earnings at the end of the financial year		2,654,534	2,429,655

All income is in respect of continuing operations.

GS1 (Global Standards 1 (Ireland))

Statement of Financial Position

	Note	2021 €	2020 €
Fixed Assets			
Tangible fixed assets	11	112,521	170,165
Current Assets			
Debtors	12	240,565	242,780
Cash at bank and in hand		2,813,866	2,503,975
		3,054,431	2,746,755
Creditors: amounts falling due within one year	13	<512,418 >	<487,265 >
Net Current Assets		2,542,013	2,259,490
Total assets less currrent liabilities		2,654,534	2,429,655
Capital and reserves			
Retained earnings		2,654,534	2,429,655
Shareholders' funds		2,654,534	2,429,655

The financial statements were approved and authorised for issue by the board:

Gerry Boylan   **PJ Timmins**
Director   **Director**

Date: 10 March 2022

Statement of Cash Flows

	2021 €	2020 €
Cash flows from operating activities		
Surplus for the financial year	224,879	103,472
Adjustments for:		
Depreciation of tangible assets	70,284	69,718
Interest and similar income	<989 >	<528 >
Interest and similar charges	1,504	---
Movement in debtors	2,215	<31,853 >
Movement in creditors	25,153	<32,219 >
Net cash generated from operating activities	323,046	108,590
Cash flows from investing activities		
Purchase of tangible fixed assets	<12,640 >	<53,191 >
Interest received	989	528
Interest paid	<1,504 >	---
Net cash outflow from investing activities	<13,155 >	<52,663 >
Net increase in cash and cash equivalents	309,891	55,927
Cash and cash equivalents at beginning of year	2,503,975	2,448,048
Cash and cash equivalents at end of year	2,813,866	2,503,975
Cash and cash equivalents at the end of year comprise:		
Cash at bank and in hand	2,813,866	2,503,975
	2,813,866	2,503,975

Notes to the Financial Statements

1. **Company Information**
   GS1 (Global Standards 1 (Ireland)) Limited is a company incorporated under the Companies Act 2014, without share capital, the liability of which is limited by the guarantee of its members, such amount as may be required, but not exceeding €1.00. The company is a not-for-profit company and its Constitution expressly forbids any form of distribution to the members of the company.

   The mission of the company is to support organisations in their efforts to improve supply and demand chain efficiency. The principal activities of the company are the licensing of global company prefixes and global location numbers to identify products and locations for the purpose of automatic data capture and for EDI. The GS1 global standards cover Bar Coding, eCommerce, Master Data Management and EPC/RFID. The company also provides a range of relevant professional and advisory services for its user organisations, including education, training, and verification services.

2. **Statement of Compliance**
   The financial statements have been prepared in accordance with accounting standards issued by the Financial Reporting Council, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" ("FRS 102").

   All references to 2021 are to the year ended 31 December 2021. All references to 2020 are to the year ended 31 December 2020.

3. **Significant Judgements and Estimates**
   The company makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

   a) Providing for doubtful debts
   The company makes an estimate of the recoverable value of trade debtors. The company uses estimates based on historical experience in determining the level of debts, which the company believes will not be collected. These estimates are based on such factors as the records of the debtor in the Companies Registration Office, the level of communication with the debtor and historical experience. The level of provision required is reviewed at the end of each financial year.

4. **Summary of significant accounting policies**

   4.1. Basis of preparation of financial statements
   The financial statements have been prepared in accordance with Financial Reporting Standard 102, the Financial Reporting Standard applicable in the UK and the Republic of Ireland and Irish statute comprising of the Companies Act 2014. The financial statements have been prepared on a going concern basis under the historical cost convention, modified to include certain items at fair value.

   The preparation of financial statements in compliance with FRS 102 requires the use of certain critical accounting estimates. It also requires management to exercise judgement in applying the company's accounting policies.

   The following principal accounting policies have been applied:

   4.2. Currency

   Functional and presentation currency
   The company's functional and presentational currency is Euro.

   Transactions and balances
   Foreign currency transactions are translated into the functional currency using the spot exchange rates at the dates of the transactions.

   At each period end foreign currency monetary items are translated using the closing rate. Non-monetary items measured at historical cost are translated using the exchange rate at the date of

the transaction and non-monetary items measured at fair value are measured using the exchange rate when fair value was determined.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the Statement of Income and Retained Earnings within 'finance income or costs'. All other foreign exchange gains and losses are presented in profit or loss within 'other operating income'.
.

4.3. Income

Income is recognised to the extent that it is probable that the economic benefits will flow to the company and the revenue can be reliably measured. Income is measured as the fair value of the consideration received or receivable, excluding discounts, rebates, value added tax and other sales taxes. The following criteria must also be met before revenue is recognised:

Income represents the amounts derived from the provision of services which fall within the company's ordinary activities, stated net of value added tax.

Income from the provision of services is recognised in the accounting period in which the services are rendered, the outcome of the contract can be measured reliably and economic benefits will flow to the company. Income from a contract to provide services is recognised in the period in which the services are provided. Accordingly, income received from customers in respect of periods which fall after the end of the financial year are not recognised as income and are included in creditors as deferred income. The company derives income from the following services:

- Membership income
- Licensing income
- Training and education of members
- Professional services

4.4 Interest income

Interest income is recognised in the Statement of Income and Retained Earnings as it is received.

4.5 Tangible fixed assets

Tangible fixed assets under the cost model are stated at historical cost less accumulated depreciation and any accumulated impairment losses. Historical cost includes expenditure that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

Depreciation is charged so as to allocate the cost of assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following basis:

Short-term leasehold property - 12.5% straight line
Fixtures and fittings - 20% straight line
Office equipment - 20% straight line
Computer equipment - 25% / 50% straight line

The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted prospectively if appropriate, or if there is an indication of a significant change since the last reporting date.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in the Statement of Income and Retained Earnings.

4.6 Operating Leases

Leases in which substantially all the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the statement of income and retained earnings on a straight-line basis over the period of the lease.

Operating lease incentives received on entering a new operating lease are credited to the statement of income and retained earnings to reduce the lease expense, on a straight line basis over the period of the lease.

4.7 Cash and cash equivalents
Cash and cash equivalents include cash on hand, demand deposits and other short-term highly liquid investments with original maturities of three months or less.

4.8 Taxation
The company is managed and controlled in the Republic of Ireland and consequently, is tax resident in Ireland. Tax is recognised in the Statement of Income and Retained Earnings, except to the extent that it relates to items recognised in other comprehensive income or equity. In this case tax is also recognised in other comprehensive income or directly in equity respectively.

i. Current tax
The company is exempt from corporation tax on its ordinary activities in accordance with the Taxes Consolidation Act, 1997. The company is however, liable for corporation tax on its earned deposit interest and other passive income.

ii. Deferred tax
Deferred taxation is calculated on the differences between the company's taxable profits and the results as stated in the financial statements that arise from the inclusion of gains and losses in tax assessments in periods different from those in which they are recognised in the financial statements. Full provision for deferred tax assets and liabilities is made at current tax rates on differences that arise between the recognition of gains and losses in the financial statements and their recognition in the tax computation, including differences arising on the revaluation of fixed assets. Deferred tax assets are recognised only to the extent that it is probable that they will be recovered against the reversal of deferred tax liabilities or other future taxable profits.

On the basis of the above, as the company is exempt from corporation tax, deferred tax does not apply with exception of tax arising on timing differences on passive income such as the unrealised gain on financial investments.

4.9 Debtors and other receivables
Sales invoices are raised and expected to be received within the company's normal credit terms, such sales do not bear interest. At the end of each reporting period, the carrying amounts of the debtors and other receivables are reviewed to determine whether there is any evidence that the amounts are not recoverable, and whether an impairment loss should be recognised.

4.10 Creditors
Creditors are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade creditors are recognised initially at the transaction price and subsequently measured at amortised cost using the effective interest method.

4.11 Employee Benefits
The company provide a range of benefits to employees, including annual bonus arrangements, paid holiday arrangements and defined contribution pension plans.

i. Short term benefits
Short term benefits including holiday pay and other similar non-monetary benefits are recognised as an expense in the period in which the service is received.

ii. Annual bonus plans
The company recognises a provision and an expense for bonuses where the company has a legal or constructive obligation as a result of past events and a reliable estimate can be made.

iii. Pension and post retirement benefit scheme
Pension costs arising under the company facilitated Personal Retirement Savings Account (PRSA) scheme are charged to the statement of income and retained earnings as incurred. The company also operates a defined contribution executive pension scheme in respect of certain employees. Contributions to the scheme are charged to the statement of income and retained earnings as incurred.

5. Income

An analysis of income by activity is as follows:

	2021 €	2020 €
Licensing and registration income	1,924,306	1,874,154
Professional advisory and training services	361,821	138,430
Other income	131,064	109,469
	2,417,191	2,122,053

All income arose in Ireland.

6. Employees

The average monthly number of employees, including the directors, during the year was as follows

	2021 No.	2020 No.
Administration	15	15

	2021 €	2020 €
Wages and salaries	1,079,839	1,072,232
Social welfare costs	112,157	108,015
Retirement benefit costs	135,265	122,241
	1,327,261	1,302,488

7. Pension and Post Retirement Benefit

The company facilitates a Personal Retirement Savings Account (PRSA) scheme for its employees, the contributions to which are paid to an independently administered fund. The retirement benefit cost for the year represents contributions payable to the fund. The contribution charged (including death in service) to the statement of income and retained earnings for the year was €81,067 (2020: €69,106).

The company also operates a company sponsored defined contribution executive scheme, supported by an external trustee. The assets of the scheme are vested in independent trustees for the sole benefit of the executives. The contribution charged to the statement of income and retained earnings for the year was €54,198 (2020: €53,135).

8. Operating Surplus

	2021 €	2020 €
Operating surplus is stated after charging:		
Directors' emoluments	-	-
Operating lease charges	110,956	111,056
Depreciation	70,284	69,718
	181,240	180,774

9. Interest receivable

	2021 €	2020 €
Bank interest receivable	989	528

10. Taxation

	2021 €	2020 €
Corporation tax		
Under provision from prior year	132	122
Total current tax	132	122
Deferred tax		
Total deferred tax	-	-
Taxation on surplus on ordinary activities	132	122

Factors affecting tax charge for the year
The tax assessed for the year is the same as the standard rate of corporation tax in Ireland of 12.5% (2020 - 12.5%). The differences are explained below:

	2021 €	2020 €
Surplus on ordinary activities before tax	225,011	103,594
Profit on ordinary activities multiplied by standard rate of corporation tax in Ireland of 12.5% (2020 - 12.5%	28,126	12,949
Effects of:		
Non-taxable mutual trading	<28,126 >	<12,949 >
Under provision from prior year	132	122
Total tax charge for the year	132	122

Factors that may affect future tax charges
In accordance with the Taxes Consolidation Act, 1997, the company is exempt from corporation tax on its ordinary activities on the basis that any surplus arising is derived from business done with its members. The company is only liable to corporation tax in respect of its deposit interest and any other passive income at the rate of 25%.

11. Tangible fixed assets

	Short-term Leasehold improvements €	Fixtures & fittings €	Office equipment €	Computer equipment €	Total €
Cost or valuation					
At 31 December 2020	342,786	10,764	61,856	410,844	826,250
Additions	-	-	-	12,640	12,640
At 31 December 2021	342,786	10,764	61,856	423,484	838,890
Depreciation					
At 31 December 2020	274,055	7,910	51,852	322,268	656,085
Charge for the year	26,484	1,411	2,423	39,966	70,284
At 31 December 2021	300,539	9,321	54,275	362,234	726,369
Net Book Value					
At 31 December 2021	42,247	1,443	7,581	61,250	112,521
At 31 December 2020	68,731	2,854	10,004	88,576	170,165

12. Debtors	2021	2020
	€	€
Trade debtors	83,405	86,063
Witholding tax	9,448	524
VAT	7,861	15,989
Prepayments	139,851	140,204
	240,565	242,780

All debtors fall due within one year. All trade debtors are due within the company's normal terms, which is 30 days.

Taxes are subject to the terms of the relevant legislation. Interest accrues on late payments. No interest was due at the financial year end date.

13. Creditors: Amounts falling due within one year	2021	2020
	€	€
Trade creditors	128,905	72,940
Taxation and social insurance	35,245	33,937
Other creditors	14,029	15,533
Accruals	309,239	339,855
Deferred income	25,000	25,000
	512,418	487,265

The repayment of trade creditors varies between on demand and 90 days. No interest is payable on trade creditors.

The terms of accruals and sundry creditors is based on underlying contracts.

Tax and social insurance are subject to terms and conditions of legislation. Interest accrues on late payments however; no interest was due at the financial year end date.

Other amounts in creditors are unsecured, interest free and payable on demand.

14. **Related Party Transactions**

Income of €2,388,189 (2020: €2,101,572) in relation to licensing fees was received from third parties who are considered as related parties of the company as they hold membership of the company under its ownership structure.

Included in the amounts above is income of €403,473 (2020: €135,524) from member entities of GS1 Ireland who are also represented on the Board of the company. There were no amounts outstanding in relation to this amount at the statement of financial position date.

Key management personnel compensation
The senior employees who have authority and responsibility for planning, directing and controlling the activities of the company are considered to be key management personnel.

Total remuneration is respect of these individuals is €447,986 (2020: €398,972).

15. **Financial instruments**

The analysis of the carrying amounts of the financial instruments of the company required under section 11 of FRS 102 is as follows:

	2021	2020
	€	€
Financial assets that are measured at amortised cost		
Trade debtors	83,405	86,063
Cash and cash equivalents	2,813,866	2,503,975
	2,897,271	2,590,038
Financial liabilities that are measured at amortised cost		
Trade creditors	128,905	72,940

16. **Commitments**

The company holds a 35-year lease beginning in November 1991 with 5 years remaining for its premises at The Nutley Building, Merrion Road, Dublin 4. The annual commitment of €94,200 is subject to review at five year intervals. On 29 January 2015, the company entered into a new 10-year lease, with a five year break clause in respect of the additional space at the Nutley Building. The annual rent commitment is €32,745.

Total future minimum lease payments under non-cancellable operating leases are as follows:

	2021 €	2020 €
Due:		
Within one year	126,945	126,945
Between one and five years	348,090	475,035
After five years	-	-
	475,035	601,980

The company also has commitments to payment of annual licence fees to GS1 AISBL, and GS1 in Europe deriving from the company's financial strength calculation.

17. **Subsequent events**

There have been no significant events affecting the company since the year end.

18. **Approval of financial statements**

The board of directors approved these financial statements for issue on 10 March 2022.

Detailed income and expenditure account

For the Year Ended 31 December 2021

	2021 €	2020 €
Turnover	2,417,191	2,122,053
Less: overheads		
Selling and distribution expenses	<135,115 >	<114,168 >
Administration expenses	<1,438,357 >	<1,409,994 >
Establishment expenses	<618,193 >	<494,825 >
Operating surplus	225,526	103,066
Interest receivable	989	528
Interest payable	<1,504 >	---
Surplus for the year	225,011	103,594
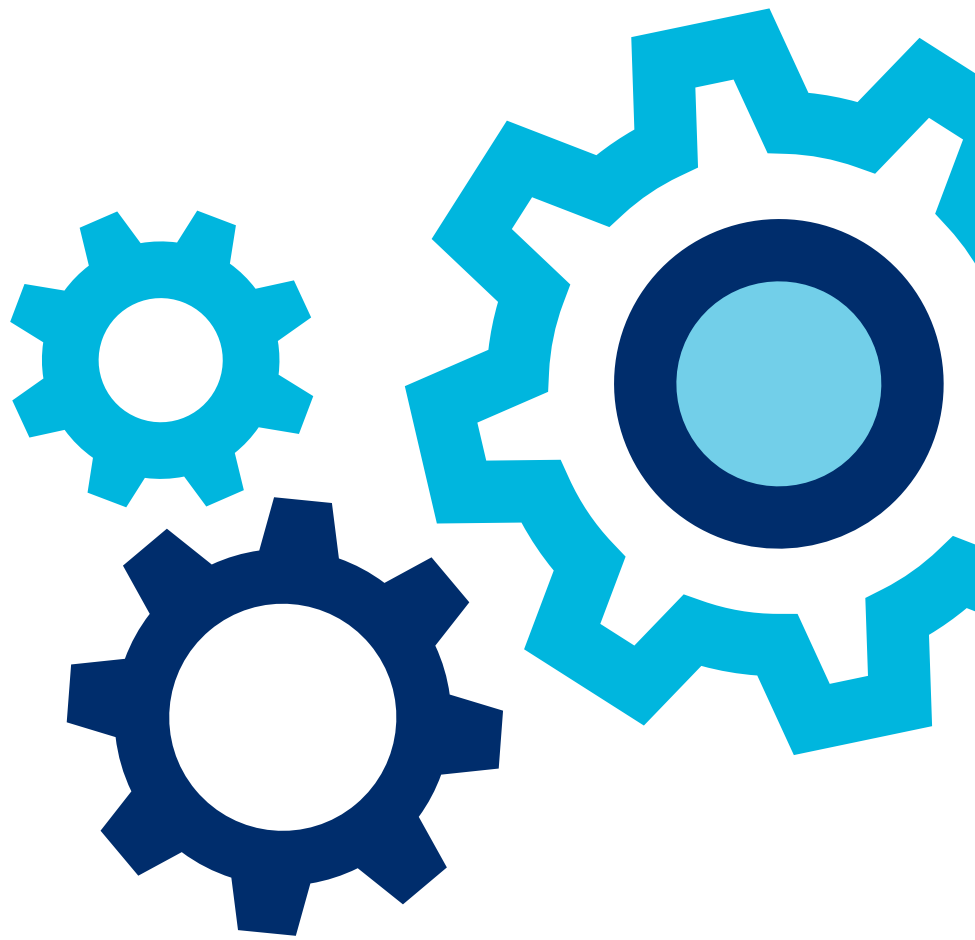
Collaborating & innovating for a better world

" "Consumers want to know everything about a product they buy or a service they experience: where it comes from, if it is good for their health, if it is safe for the environment. To strengthen the trust of consumers, we must offer increased transparency by providing more and more trusted, accurate information. Thanks to Verified by GS1, retailers, manufacturers and e-retailers can provide the right data to enable the transparency demanded by consumers."

Mike Byrne,
CEO, GS1 Ireland