A Collaborative Approach to Deliver Global Interoperability
SNOMED International* is a not-for-profit organization that owns and maintains SNOMED CT, the world’s most comprehensive clinical terminology. We play an essential role in improving the health of humankind, by determining standards for a codified language that represents groups of clinical terms. This enables healthcare information to be exchanged globally for the benefit of patients and other stakeholders. We are committed to the rigorous evolution of our products and services, to support the growing needs of our Members and deliver continuous innovation for the global healthcare community.

*SNOMED International is the trading name of the International Health Terminology Standards Development Organisation (IHTSDO)
MESSAGE FROM THE GENERAL ASSEMBLY CHAIR, MANAGEMENT BOARD CHAIR AND CEO

The world has come to know a “new normal” that has resulted in a host of unforeseen demands impacting citizens globally. It’s a reality we have observed as these pandemic-related circumstances and evolving requirements have affected our universe of stakeholders: Policy Makers, Members, Collaboration Partners, Researchers, Implementers, Vendors, Care Providers, and Patients and Citizens. And as much as recent events have reshaped our stakeholders’ lives and work, so, too, have they impacted the evolution and advancement of the SNOMED CT clinical terminology.

The organization’s 2021 Annual Report, A collaborative approach to deliver global interoperability, provides SNOMED International the opportunity to share what is possible when committed and passionate individuals answer the call to work together to deliver the most comprehensive, clinically assured, stable and innovative clinical terminology available. Achievement, however, is rarely fostered and realized in isolation; instead, it is the collaborative efforts of this steadfast group of our stakeholders that have helped to drive continued advances across our products, services, adoption and innovation goals. The vision of delivering one global language of health is shared across the entire SNOMED CT membership. In 2021, our community continued to grow with new Members Germany and the United Arab Emirates, whose contributions have already positively impacted the global SNOMED CT community.

Guided by different facets of The Case for Investment in SNOMED CT, a report that distills the essence of what makes SNOMED CT unique and a valuable investment, in
MESSAGE FROM THE GENERAL ASSEMBLY CHAIR, MANAGEMENT BOARD CHAIR AND CEO (CONTINUED)

2021 the organization executed critical elements of its 2020-2025 strategy and established solid foundations for the future. One of those critical elements is a commitment to engage with our global community through collaborations that produce alliances and products serving the needs of our stakeholders, improving the quantity and quality of SNOMED CT’s clinical content and promoting greater interoperability. In 2021, SNOMED International negotiated a number of significant new and renewed collaboration agreements with clinical and standards organizations, including Inserm, the Academy of Nutrition and Dietetics, the American Academy of Periodontology and the European Federation of Periodontology, DICOM, HL7 and the International Council for Harmonisation of Technical Requirements for Pharmaceuticals, truly positioning SNOMED CT as a hub where clinical and health standards come together.

Another substantial shift we observed in 2021 was the preparation to move to more frequent releases of SNOMED CT. Informed by ongoing stakeholder engagement, the move from twice annual to monthly releases is a pivotal shift in how the terminology is provisioned, as well as how we as an organization continue to meet the evolving needs of a growing community of users.

Clinical engagement continues to be critical in how we clinically assure a safe and high-quality product, as well as growing the clinical breadth and depth of SNOMED CT. Collaboration and clinical engagement are at the heart of what we do, and this approach is reflected in 2021’s clinical activities and range of negotiated collaboration agreements.
MESSAGE FROM THE GENERAL ASSEMBLY CHAIR,
MANAGEMENT BOARD CHAIR AND CEO (CONTINUED)

which translate into SNOMED CT content. Our collaborations with partners enable SNOMED CT to play a role in improving patient care for those with known and anticipated health concerns, but also to respond and contribute to unforeseen global events such as the COVID-19 pandemic that have required the use of SNOMED CT terminology in COVID-19 vaccine certificates and research on the long term impacts of COVID-19.

As we reflect upon last year’s achievements and learning opportunities, the picture that emerges is shaped by the spirit of engagement and collaboration that drives every aspect of the work we do. Confirmed by the G7 congress in mid 2021, enabling digital healthcare systems worldwide to work together seamlessly so patients don’t suffer as they move between providers, facilities and even countries should be our paramount goal. Fulfilling this goal requires international collaboration, and a coalition in which SNOMED International is eager to participate. Working hand in hand with fellow health standards development organizations, as well as with national, clinical and technical entities, SNOMED International continues to dedicate resources to achieve the goal of digital health interoperability.

As an organization committed to progress, we endeavor to strike alliances, build partnerships and push the boundaries of clinical excellence needed to serve our Members and stakeholders globally.
2021 SUMMARY

- 2 business meetings with 50+ group sessions
- 6 education courses
- 7 industry events/conferences
- 2 major reports
- 23 press releases + blogs
- 15 webinars
- Virtual onboarding and developer training

- 68 strategic deliverables
- 2 SNOMED CT International Edition releases
- 1 Spanish International Edition release
- 9 derivative, freeset and refset products
- Delivered ongoing SNOMED CT COVID-19 content and implementation guidance
- SNOMED CT Virtual Expo
- Derivative, freeset and refset products
- Significant tools & product enhancements: Concrete Domains, Community Content, Frequent Releases, Snap2Snomed

- An organization powered by
  - 50 employees
  - in 6 countries

- 2 new Members
- 5 new and renewed collaboration agreements

- 6 education courses

- 6 countries

- 68 strategic deliverables

- 50 employees

- 6 countries

- 2 new Members

- 5 new and renewed collaboration agreements
2020-2025 STRATEGY UPDATE

ADVANCING OUR COMMITMENTS

2021 marked the second year of the organization’s 2020-2025 Strategy. Developed in 2019 with our governance bodies and Members, this strategy is guided by our commitment to ensure that by 2025, clinical terminologies will be the one language of health, contributing to better health and improved outcomes for patients around the globe. It also reflects SNOMED International’s shift to adopting a product and services-based approach across all facets of the organization, ranging from how we maintain, quality assure and deliver SNOMED CT through to growing adoption, fostering collaboration and embracing emerging technology – all through a Member and stakeholder lens.

Throughout 2021, we continued to meet our strategy commitments amid ongoing activities to support Members and others, in our capacity as a clinical terminology provider, in their management of the COVID-19 pandemic.
2020-2025 STRATEGY UPDATE

ADVANCING OUR COMMITMENTS

The first two years of the strategy were focused on preparing to deliver SNOMED CT as a service and developing a content development roadmap as well as becoming a Terminology Integrator, while prioritizing collaborations with key partners to address and deliver high-priority initiatives.

**Products and Services Goal:** Evolve SNOMED CT to best serve improvements in patient outcomes and meet the needs of the integrated health and social care systems in a sustainable fashion

**Adoption Goal:** Increase adoption and consumption of SNOMED CT for Members and other users by ensuring it is pragmatic, effective and verifiable; provide sustainable and approachable products and services to support the implementation of SNOMED CT

**Innovation Goal:** Leverage emerging technologies such as artificial intelligence to deliver value for stakeholders and drive efficiencies both at the point of care, across the organization and in the evolution of the product

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**2020-2025 STRATEGY by the numbers**

- 5 years
- 159 deliverables
- 6 priorities
- 19 strategic success criteria
- 3 strategic directions
- 68 strategy deliverables in 2021
In early 2021, Germany became SNOMED International’s 41st Member. To incorporate SNOMED CT into the nation’s healthcare and medical research communities, the clinical terminology was initially introduced via a pilot program through Germany’s Medical Informatics Initiative. Following completion of that pilot the country’s Federal Institute for Drugs and Medical Devices became the National Release Centre for SNOMED CT.

SNOMED CT has since been incorporated into Germany’s e-health strategy and is now freely available to any non-profit, public or private organizations in Germany in accordance with the country’s Patient Data Protection Act.

Having access to SNOMED CT and related products and services, as well as to extensive SNOMED International subject matter expertise and a global community of implementers and users, has enabled Germany to make great strides in its efforts to not just solve interoperability challenges, but to optimize its secondary use of clinical data, support in-depth medical research, better understand diseases and their treatments, and deliver more targeted patient care. Data integration centres located at university hospital sites across Germany collect and prepare healthcare and research data locally and make them available for multiple sites for clinical and healthcare research.

Using standardized data formats and applying a consistent medical terminology have also been key to Germany’s efforts in managing the COVID-19 pandemic.
The designations employed and the presentation of the material on this map do not imply the expression of any opinion whatsoever on the part of IHTSDO trading as SNOMED International concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The depiction and use of boundaries, geographic names and related data shown on the map are not warranted to be error free nor do they imply official endorsement or acceptance by IHTSDO trading as SNOMED International or its member organizations. Further, Member organizations are not accountable for any data presented on this map.
SNOMED International now has 41 Members spread across the globe, two of whom (Germany and the United Arab Emirates) joined in 2021. This past year the European Union (EU) also agreed to provide a grant of 60 per cent of the annual SNOMED CT Membership licensing fee to EU member states with the goal of making it easier for those countries to use SNOMED CT and to have a common and strong European voice to further shape SNOMED CT in the interests of Europe. This funding is available to all European member states through the European Health and Digital Executive Agency until 2027.

2021 was further marked by a groundswell of activity among our Members to expand and tailor to their national needs the implementation of SNOMED CT, particularly with respect to using the clinical terminology in their efforts to manage the COVID-19 pandemic in their nations.
OUR PRODUCTS AND SERVICES

Each year we continue to improve and update SNOMED CT, our core product, as well as all of our supporting products and services. In 2021, we continued to support and respond with agility to the ongoing COVID-19 crisis by monitoring the evolving pandemic to address terminology needs, including emergency use authorizations for vaccines and medications; supporting vaccination certificates; and providing single-source access to COVID-19 related terminology.

SNOMED International’s suite of products and services includes:

- **SNOMED CT**, our core product. Traditionally, each January and July, we have released the International Edition as well as nine derivative, freiset and reference set products throughout the year; in October, we release the Spanish language version of the International Edition. In 2021, we began to pilot frequent monthly releases of the International Edition;

- the **Global Patient Set**, a managed collection of existing reference sets licensed under the Creative Commons Attribution 4.0 International License and available to any user at no cost. We release this product every September;

- **Snowstorm Terminology Server**, which enables full management of SNOMED CT in an open-source server; and

- **SNOMED International’s Managed Service**, an online service that allows subscribed Members to easily manage and distribute a release of a SNOMED CT local extension from start to finish. In 2021, SNOMED International provided Managed Services for Austria, Belgium, Denmark, Estonia, Ireland, New Zealand, Norway, South Korea, Sweden, Switzerland and the U.S.
NOTABLE 2021 PRODUCTS AND SERVICES HIGHLIGHTS

SNOMED CT: FREQUENT RELEASES

In 2021, SNOMED International began to pilot a more frequent delivery schedule of the SNOMED CT International Release Package, rather than the end of each January and July. Making the product available on a monthly basis means less down-time required between release cycles, enabling faster turnaround of authoring content and a more agile and responsive terminology. Additionally, smaller content projects can potentially reduce the time required for urgent content changes.

COMMUNITY CONTENT

SNOMED International has moved toward “democratizing terminology” by enabling stakeholders to contribute to and participate in the ongoing development, maintenance and improvement of SNOMED CT. In 2021, we created and piloted a collaborative platform for global content outside the current scope of the International Edition, providing organizations, groups and individual users rapid global access to content without having to wait for SNOMED International official releases.

CONCRETE DOMAINS

SNOMED International has added concrete domains to SNOMED CT, which is an enhancement to SNOMED CT’s logic features that increases the flexibility of SNOMED CT.
GLOBAL PATIENT SET

The Global Patient Set (GPS) is a managed collection of existing reference sets, licensed under the Creative Commons Attribution 4.0 International License and available to any user at no cost. The GPS, which was launched in September 2019, includes freely available clinical content across dentistry, renal, family and general practice and nursing areas, and IHE, DICOM and HL7 International Patient Summary domains and activities. The GPS provides access to reference sets and opportunities to explore the benefits of using a structured clinical terminology, and serves as a starting point for further conversations with our Member community and the SNOMED International resource base.

The September 2021 GPS included all COVID-19 content, including vaccines, as well as relevant SNOMED CT content available in the July 2021 SNOMED CT International Edition, and an updated SNOMED CT to ICD-10 map.

OTHER 2021 PRODUCTS & SERVICES HIGHLIGHTS

In 2021 we laid the groundwork to enhance implementation support services to assist a range of stakeholders, including National Release Centres, healthcare providers, research organizations and vendors, with their implementations of SNOMED CT, and to develop resources to support the adoption, implementation and deployment of SNOMED CT enabled solutions.
**RELEASEx TIMELINE**

**JANUARY**
- SNOMED CT International Edition
- SNOMED CT to ICD-10 / ICD-O Maps

**FEBRUARY**
- SNOMED CT Concrete Domains Technical Preview Production release
- Successful launch of the Community Content platform, information pages and provision of collaborative authoring

**MARCH**
- Managed service releases for Belgium, Denmark and the U.S
  - Derivative Products:
    - SNOMED CT to GMDN Map

**APRIL**
- SNOMED CT Spanish Edition
- Managed service releases for Ireland, New Zealand and Norway
  - Derivative Products:
    - SNOMED CT MedDRA map package

**MAY**
- Managed service releases for Estonia and Sweden

**JUNE**
- Internal monthly release of SNOMED CT International Edition
- SNOMED CT International Spanish Edition
  - Managed service releases for Ireland, New Zealand and Norway
  - Freesets Products:
    - DICOM, ERA/EDTA, IHE
  - Derivative Products:
    - Reference Sets:
      - SNOMED CT GP/FP
      - SNOMED CT General Dentistry
      - SNOMED CT Odontogram
      - SNOMED CT Nursing activities and Nursing health issues
      - ICNP SNOMED CT (OCT) – new product
    - SNOMED CT to Orphanet map production release

**JULY**
- SNOMED CT to ICD-10 / ICD-O Maps

**AUGUST**
- Internal monthly release of SNOMED CT International Edition
- SNOMED CT International Spanish Edition
  - Managed service releases for Ireland, New Zealand and Norway
  - Freesets Products:
    - DICOM, ERA/EDTA, IHE
  - Derivative Products:
    - Reference Sets:
      - SNOMED CT GP/FP
      - SNOMED CT General Dentistry
      - SNOMED CT Odontogram
      - SNOMED CT Nursing activities and Nursing health issues
      - ICNP SNOMED CT (OCT) – new product
    - SNOMED CT to Orphanet map production release

**SEPTEMBER**
- Managed service releases for Belgium, Denmark and the U.S
- SNOMED International Global Patient Set (GPS)
- First internal monthly release of SNOMED CT International Edition
  - Derivative Products:
    - SNOMED CT to GMDN Map
    - Freesets + Reference Set Products: HL7 International Patient Summary

**OCTOBER**
- Internal monthly release of SNOMED CT International Edition
- Managed service releases for Ireland, New Zealand and Norway
  - Freesets Products:
    - DICOM, ERA/EDTA, IHE
  - Derivative Products:
    - Reference Sets:
      - SNOMED CT GP/FP
      - SNOMED CT General Dentistry
      - SNOMED CT Odontogram
      - SNOMED CT Nursing activities and Nursing health issues
      - ICNP SNOMED CT (OCT) – new product
    - SNOMED CT to Orphanet map production release

**DECEMBER**
- Internal monthly release of SNOMED CT International Edition and used as the January 2022 Members release
- Managed service first release for Switzerland
- Snap2SNOMED tool deployed, supporting SNOMED CT implementation by enabling users to collaboratively create and maintain simple maps to SNOMED CT using a guided approach

**Announcement of plans to extend the core of SNOMED CT’s structured clinical terminology to deliver an open, standalone sub-ontology to support the scope of content within the International Patient Summary**
PRODUCTS + SERVICES

CONTENT ENHANCEMENTS

ANATOMY
- Revised and refined content related to periarticular bone structure and the vertebral column, including bone regions

DEVICES
- Continued revision of implant content and editorial guideline
- Inactivated ~1,800 device concepts denoting frequency of use and size or dimension

DRUGS
- Addressed content enhancements identified by the Drug Extension User Support group; deployed concrete domain functionality; added COVID-19 vaccine-related concepts and attributes to support vaccine modeling; updated editorial guidelines

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PRODUC T S + SER VICES

C O N T EN T E N H A NC E MEN T S

SOC I AL D ETERMI N A N T S O F H E A LT H (SDoH) A ND S OC I A L C AR E

- Included SDoH content from the US Gravity Project
- Completed Social Care gap analysis to prepare for addition of SDoH content to SNOMED CT in 2022

TRADITIONAL MEDICINE

- Traditional medicine content is an extension of the SNOMED CT International Edition and is available separately as a sub-ontology contributed to by SNOMED International Members in Malaysia, India and China

UNICOM

- Ongoing participation in the UNICOM project, an initiative focusing on the implementation of the International Organization for Standardization suite of Identification of Medicinal Products standards
SNOMED International makes it a priority to ensure the interoperability of SNOMED CT with other health informatics standards in support of our Members and Affiliates and their efforts to deliver integrated and informed care. We use collaboration and licensing agreements to structure the addition of content into SNOMED CT, and maintain an active program of partnerships with international standards development organizations, professional clinical bodies and commercial organizations.
PRODUCTS + SERVICES

CONTENT PARTNERS AND COLLABORATIONS

**MedDRA**
- Released the production version of MedDRA to SNOMED CT bi-directional map and SNOMED CT to MedDRA maps

**Academy of Nutrition and Dietetics**
- Announced a new collaboration agreement with the Academy of Nutrition and Dietetics to include the Academy’s Nutrition Care Process Terminology version 2020 in the International Edition of SNOMED CT

**International Council of Nurses**
- Released the International Classification of Nursing Practice (ICNP) SNOMED CT Nursing Practice Refset based on the 2019 release of ICNP and the July 2021 International Edition Release of SNOMED CT

**American Academy of Periodontology**
- Announced a new collaboration agreement with the American Academy of Periodontology and the European Federation of Periodontology to update and augment the periodontology content in SNOMED CT

**European Federation of Periodontology**
- Announced a new collaboration agreement with the American Academy of Periodontology and the European Federation of Periodontology to update and augment the periodontology content in SNOMED CT

**World Health Organization**
- Renewed our longstanding agreement to publish a SNOMED CT Freeset of coded concepts in the Digital Imaging and Communications in Medicine (DICOM) Standard

**DICOM**
- Renewed our collaboration agreement with HL7 International to further support the implementation of SNOMED CT in HL7 artefacts, consistent with our mutual commitment to advance global health data interoperability

**HL7**
- More than 4,000 concepts were added to the ICD-10 Map over the January and July releases
- Full map from SNOMED CT to ICD-11 MMS completed

**Orphanet**
- SNOMED CT to Orphanet Map was released in October 2021
- Work continued over the year to add further content for the SNOMED CT to Orphanet Map for future releases: in 2021, 199 new concepts were added to SNOMED CT for future inclusion in the SNOMED CT to Orphanet Map

**GMDN**
- Added, modified and removed a total of 332 concepts to the SNOMED CT July 31 International Edition release

**Learn more**
MEMBER SUCCESS STORY:
EUROPE, MIDDLE EAST AND AFRICA

SNOMED CT HELPS UK'S NATIONAL HEALTH SERVICE BETTER UNDERSTAND THE IMPACT OF COVID-19 ON CANCER SERVICES

The United Kingdom, a long-time Member of SNOMED International, wanted to better understand the impact of the COVID-19 pandemic on local and national cancer services. Using open standards such as SNOMED CT, Health Data Research UK (HDRUK), the UK’s national institute for health data science, analyzed data from Hospital Trusts across the region to determine the pandemic’s impact on the cancer system, which resulted in patients waiting much longer to see their physicians and present with symptoms, missed standard timelines for cancer referrals, and much lower attendance rates for chemotherapy/treatment appointments, all of which ultimately affect the five-year survival rate for such patients.

Looking at excess mortality data from nearly four million UK citizens, the UK found a significant number of predicted excess deaths, and even higher risks for those with specific comorbidities. Using SNOMED CT coded data, the NHS found that for certain cancers, the pandemic effects on treatment and research could set the healthcare system back an entire decade.

The analysis enabled by SNOMED CT reveals the challenges the pandemic posed to cancer patients, but has also supported the cancer system’s path to recovery by showing how taking actions such as prioritizing self-administered Faecal Immunochemical Testing over hospital or clinic-administered colonoscopies can help the NHS reduce the backlog and ease the pressure on the cancer system.
In 2021, SNOMED International released its refreshed SNOMED CT Case for Investment report. Available on an interactive platform, the Case for Investment presents evidence that SNOMED CT adds measurable value to a broad range of primary and secondary health processes leveraging SNOMED CT encoded data to enable improved patient outcomes. Through the narrative, the report provides accessible and understandable answers to questions such as, "what is SNOMED CT?", "what makes SNOMED CT unique?", "how and where is it in use globally?" and "why invest in SNOMED CT?"

SNOMED CT, the most comprehensive multilingual clinical healthcare terminology in the world, possesses unique characteristics that differentiate it from other classifications and terminologies. Among these characteristics are SNOMED CT's position as a core reference terminology, its clinically comprehensive 350,000+ concepts supported by a machine-readable semantic network, broad use and mandate in select countries.

Showcasing real world use and outcomes of SNOMED CT is the best way to demonstrate its value, understanding that SNOMED CT must be embedded in a clinical information system, health data & analytics platform or an interoperability solution for it to function. Through the Case for Investment, 10 examples of SNOMED CT use across data entry and integration, clinical information sharing, point of care analytics, population and management analytics and research domains have been featured. Ranging across different countries such as Australia, Canada, China, the United Kingdom and the U.S., continued collection of additional SNOMED CT case studies remains an ongoing priority.
GLOBAL STAKEHOLDER ENGAGEMENT

Over the past two years, a continuing organizational priority has been to increase our efforts to engage with our many stakeholder groups and solicit their feedback, through activities such as:

- hosting events and webinars;
- conducting annual Member and implementer surveys to better understand how our clinical terminology is being used and how we can best support our users;
- providing thought leadership at speaking engagements;
- participating in industry events; and
- supporting a growing number of language-focused activities such as the development of a translation strategy and the re-launch of our Spanish-speaking working group.

We have also been developing innovative ways to support the adoption of SNOMED CT through the provision of no-fee licensing for research purposes, particularly as needed to better understand COVID-19, and to facilitate the adoption of the terminology in European Union countries.
ENGAGING OUR STAKEHOLDERS

GLOBAL ACTIVITIES

AMERICAS

In addition to ongoing engagement with SNOMED CT users throughout the Americas, including Brazil, Colombia, Ecuador, Mexico and the U.S. and participation in regional conferences held by the Pan American Health Organization and HIMSS, we also presented to the Global Digital Health Partnership to support our shared Members and at the Canada-based Global Alliance for Genomics and Health clinical/phenotype workstream meeting. As well, we have continued to support the SNOMED CT French translation group to share currently available French translations.

ASIA PACIFIC

Throughout 2021, we continued to support stakeholders in the region through contributing to traditional medicine content in SNOMED CT and participating in regional webinars, conferences, workshops, presentations and virtual engagements, including:

- the Asian eHealth Information Network;
- the Nursing Informatic Conference;
- the Brazil, Russia, India, China and South Africa (BRICS) Digital Health Virtual Summit, chaired by India;
- the Australian e-Health Research Colloquium;
- New Zealand’s Open Forum;
- Australia’s Clinical Terminology User Group meeting; and
- The Beijing Tiantan Hospital Big Data Centre.
ENGAGING OUR STAKEHOLDERS

GLOBAL ACTIVITIES

EUROPE

One of the most notable highlights of our 2021 activities in Europe has included working with the European Union to support the EU’s efforts to make SNOMED CT more accessible to its member states by subsidizing the annual SNOMED CT licensing fee. Other highlights include:

• onboarding Germany, which joined SNOMED International in early 2021, and supporting the German translation group that is currently working toward the development of a global German translation for German-speaking users;
• joining as a member the Towards the European Health Data Space project to support data sharing and research in Europe;
• providing a research license for the EU-wide Orchestra project, a three-year international research project aimed at tackling the coronavirus pandemic; and
• participating in Portugal eHealth Week, Medical Informatics Europe 2021 and UNICOM webinars.

MIDDLE EAST & AFRICA

The two most notable activities in 2021 in this region were the addition of the United Arab Emirates as our 41st Member and the completion of a project in conjunction with New Zealand-based The Sovereignty Network to address child and maternity health in Africa through Sovereignty’s “Ejo Health” SNOMED CT encoded application. We continue to promote the project and further deployment across Rwanda and other African Union and World Bank countries.
MEMBER SUCCESS STORY:

LARGE-SCALE IMPLEMENTATION OF STANDARDIZED HEALTHCARE INFORMATION SYSTEM IN INDIA

The Department of Health & Family Welfare of the Kerala State in India has implemented the eHealth Kerala Project with an aim of creating One Person One Electronic Health Record for the state. An effective IT-enabled integrated framework is established by linking all the 1,280 public hospitals in the state. Citizens can access their Electronic Health Record any time from anywhere through the eHealth Web Portal.

The Hospital Management System used in the project supports the healthcare interoperability standards as set out by the Government of India’s Ministry of Health & Family Welfare (MoHFW), including SNOMED CT, LOINC, and HL7. SNOMED CT is integrated to capture different clinical parameters including patient history, presenting complaints, examination details, findings, procedures, diagnosis, etc. using India’s Centre for Development of Advanced Computing toolkit for SNOMED CT provided by India’s National Release Centre. The system also uses SNOMED CT to ICD-10 mapping internally to generate ICD-based reports. The eHealth project is currently functional at 323 hospitals and more than 1.45 million patient records are created under this project.
ENGGING OUR STAKEHOLDERS

SNOMED CT EXPO 2021

The 2021 Expo was again a virtual offering due to ongoing COVID-19 health and safety considerations. The two-day event, which saw record attendance of more than 1,400 delegates, provided an exceptional opportunity for participants to experience the latest thought leadership in the intersection of digital health and clinical terminology, and in emerging technologies such as artificial intelligence, machine learning and precision medicine. It also offered unparalleled educational opportunities in multiple languages for the first time and enabled attendees to explore the ever-expanding universe of SNOMED CT implementation experience at the multi-track conference featuring sessions from knowledgeable users across the globe.
ENGAGING OUR STAKEHOLDERS

BUILDING ON STRONG FOUNDATIONS
WITH INDUSTRY PARTNERS

SNOMED CT provides the core clinical reference terminology for electronic health records and health data analytics platforms. Establishing strong, productive relationships with the vendor community is key to ensuring the long-term success of the development, adoption and implementation of SNOMED CT globally, and continues to be the cornerstone of our innovation strategy.

Two of our main 2021 achievements in this area include forging partnerships with vendors to extend usage of SNOMED CT within their products, and pursuing a Member partner for an analytics pilot and other partners for precision medicine initiatives.

Other activities include:

- **completing** the UK-based TCC Casemix Ltd. Hospital Operations for Sustainable Productivity project;
- **establishing** a Patient Friendly Terms working group with vendors and two Members (Netherlands and New Zealand);
- **working** with Aurelius, a Netherlands-based company with a network of hospitals and clinics in India and a company that provides a hospital information system (HIS), to develop a new, cloud-based HIS built from the ground up using SNOMED CT; and
- **drafting** an agreement with Apple to participate in SNOMED International’s Patient Friendly Terms working group, the first non-profit data contribution in Apple’s history.

Visit the Vendor Marketplace

Our Marketplace, which features 47 vendors, is a section of our website where SNOMED CT vendors can register to exchange business information with potential purchasers.
ENGAGING OUR STAKEHOLDERS

PRIORITIZING OUR CLINICAL, RESEARCH AND IMPLEMENTATION COMMUNITIES

SNOMED International continues to invest in building its clinical, research and implementer communities.

**CLINICAL:** In 2021, the organization supported nine Clinical Reference and 10 Project Groups; one of those, the Ophthalmology Clinical Reference Group, was formed in 2021. In addition to participating in regular working meetings, members of these groups participate in dedicated clinical education sessions as part of our April and October business meetings with the goal of collaborating and knowledge-sharing. In 2021, 750 participants joined our Web Series in which clinicians working with SNOMED CT shared their real-world experience in the five clinical webinars we hosted.

**RESEARCH:** In 2021, the Research Reference Group established in 2020 worked toward the group’s objectives of determining the standards development organizations, research groups and individuals to maximize our engagement with the research community. 385 participants attended the eight research webinars we hosted throughout the year, each hosted by distinguished researchers from the SNOMED CT community.
OVERVIEW | MEMBERS | PRODUCTS + SERVICES | ADOPTION | INNOVATION | ENABLING SUCCESS | FINANCIALS | GOVERNANCE

OVERVIEW | MEMBERS | PRODUCTS + SERVICES | ADOPTION | INNOVATION | ENABLING SUCCESS | FINANCIALS | GOVERNANCE

IMPLEMENTERS: SNOMED international seeks to better understand and support the SNOMED CT implementation experience in a variety of ways. One of those is via the User Support Reference Group, which was launched in 2019 to provide an avenue for participants such as Member country representatives, SNOMED CT implementation course graduates, advanced end users and vendors to explore SNOMED CT implementation topics, share lessons learned and advocate for best practices.

It incorporates a number of activities, including, in 2021, an Implementation Webinar on the topic of the practical application of SNOMED CT in clinical decision support and integration with GP health records, the Drug Extension User Support Group and the Mapping Tool User Group (MTUG).

LAUNCH OF OUR IMPLEMENTATION SUPPORT TEAM

In 2021, SNOMED International formed an implementation support team with the goal of enabling SNOMED CT users, including National Release Centres, healthcare providers, researchers and vendors, to achieve the full potential of SNOMED CT. SNOMED International piloted this new offering with a number of countries, including the Republic of Vietnam, that have implemented SNOMED CT pilot projects, with plans to roll it out more broadly in 2022. One of the first deliverables in 2021, the Implementation Support Portal, was created to provide a broad range of resources for users as they progress their SNOMED CT implementation journey.
MEMBER COLLABORATION STORY:
AMERICAS

CANADA SUPPORTS PROFESSIONAL FRENCH TRANSLATION OF SNOMED CT NATIONALLY AND INTERNATIONALLY

As a founding member of SNOMED International, Canada is proudly engaged in meaningful collaboration with partners inside and outside of its borders. With its federal, provincial and territorial partners, Canada Health Infoway, as the Canadian National Release Centre (NRC), continues to drive adoption of SNOMED CT nationally and internationally.

Access to health care and health equity across various cultures and settings are at the heart of Canadian health care values, and strong motivators for Canada’s many SNOMED CT-related collaborations. As such, Canada proudly supports professional French translation of SNOMED CT concepts for Canadians, through its national French Edition, and internationally through stewardship of the Common French Edition. The NRC has continued to contribute extensively to international collaborations on COVID-19 vaccines, organisms, the social determinants of health, and the modernization of gender, sex and sexual orientation information practices. Canada has also been actively engaged in activities related to the International Patient Summary as a member of the Global Digital Health Partnership.
SNOMED International delivers SNOMED CT education through the organization’s e-learning platform and supports general clinical terminology education globally by providing SNOMED CT-focused courses, certifications, educational materials and related documents; partnering with other education providers; and participating in educational activities such as guest lecturing at universities.

2021 education highlights include:

- developing the Authoring Level 2 course;
- developing the requirements for qualifications necessary for external users to edit content in the SNOMED CT International release as part of our move toward more frequent releases; and
- upgrading the SNOMED International e-learning platform.

As SNOMED International continues to grow, so, too, does our commitment to provide more resources in languages other than English. In 2021, the Introduction to SNOMED CT Tutorial at SNOMED CT Expo 2021 was offered in English, French, German and Spanish for the first time.
EDUCATION

A BROAD RANGE OF COURSES AND PATHWAYS

NUMBER OF COURSE/CERTIFICATION GRADUATES SINCE INCEPTION

<table>
<thead>
<tr>
<th>Course/Certification</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNOMED CT Foundation Course (English)</td>
<td>2923</td>
</tr>
<tr>
<td>SNOMED CT Authoring Level 1 Course</td>
<td>191</td>
</tr>
<tr>
<td>Curso de Fundamentos (Spanish)</td>
<td>280</td>
</tr>
<tr>
<td>SNOMED CT Authoring Level Certification</td>
<td>61</td>
</tr>
<tr>
<td>SNOMED CT Terminology Services Certification Course</td>
<td>33</td>
</tr>
</tbody>
</table>

Learn more about SNOMED courses and certification
Innovation is a core component of our 2020-2025 organization strategy. Our goal is to leverage emerging technologies such as artificial intelligence (AI), machine learning and precision medicine to deliver value for stakeholders and drive efficiencies at the point of care, across the organization and in the evolution of our products and services.

2021 was marked by further strengthening of our partnerships with academic, research, industry and clinical organizations to continue to advance our innovation-focused activities and achieve the innovation-specific strategic goals we set out for that year.
INNOVATION

Our 2021 innovation activities include:

- **developing**, in conjunction with Australia’s Commonwealth Scientific and Industrial Research Organisation, Snap2SNOMED, a tool that enables external stakeholders to map from other coding systems to SNOMED CT using automation;

- **working** with UK-based tech consultancy UNAI on a project to use AI techniques to improve the quality of SNOMED CT terms;

- **as part of** our Emerging Technologies Strategic Projects, working with the UK’s University of Manchester to complete a sub-ontology extraction project to enable the automatic identification and extraction of SNOMED CT content semantically related to a set of focus concepts. This tool helps SNOMED International more rapidly respond to the needs of users and enables the sharing of content between national extensions; and

- **completing** a prototype map from SNOMED CT to ICD-11 MMS using machine learning techniques to automate the generation of the map.
MEMBER SUCCESS STORY:

ARGENTINA EXPANDS USE OF SNOMED CT IN 2021

In 2021, the implementation of SNOMED CT in Argentina continued to grow rapidly. The country has reached over 950 affiliates, including the public and private sectors.

Argentina’s National Release Centre (NRC) has achieved a series of milestones in collaboration with other areas of the Ministry of Health that are particularly remarkable. The NRC developed a mapping of primary health care concepts from the hierarchy of procedures to ICD-10 (Cross Reference Set).

With the enactment of the new Argentina Law 27, 610, a review of all the concepts related to abortion was carried out with the Sexual and Reproductive Health Directorate. The review found that terminology updates were needed to meet current clinical purposes. The NRC has presented a case for the inactivation of the concepts related to the interruption of pregnancy that makes reference to legality. Related to this, the Argentina NRC also developed a mapping of the concepts related to abortion and sexual health to chapter U of ICD-10 which has been established by the Argentinian National Directorate of Statistics and Information in Health.

Lastly, given the growth of implementation of SNOMED CT in Argentina, it has become necessary to enable a communication channel for user concerns and needs regarding terminology content. The NRC has worked to distribute a REDCap form for content requests in public health centres. This will allow for direct communication of user needs for changes and updates to the Argentina Edition of SNOMED CT.
ENABLING SUCCESS

INDUSTRY-LEADING CORPORATE SERVICES MANAGEMENT

To ensure we meet our commitments and mitigate against risks, SNOMED International adheres to rigorous business standards and practices. A few highlights of the organization’s corporate services activities in 2021 include:

- supporting all governance interactions with our Members;
- overseeing the reporting of the organization’s strategy and operations;
- undertaking key projects to provide better insights into the development and ongoing analysis of the organization, such as Trend Analysis/Horizon scanning; and
- ensuring the organization’s financial controls and mechanisms continue to remain an industry “gold standard.”
ENABLING SUCCESS

AN AGILE WORKFORCE ADAPTING TO CURRENT AND FUTURE CHALLENGES

SNOMED International continually assesses the skills and strengths of its workforce to ensure the organization is ready to meet the challenges of the day and beyond. In 2021, we continued to successfully support our team members to navigate the COVID-19 pandemic as well as to take the pulse of our 50 team members in six countries through a biannual employee satisfaction survey.

We also implemented other activities and processes designed to optimize communication between and among team members and management, including the resumption of some in-person meetings in accordance with local regulations. Convening small, localized holiday gatherings that enabled newer staff members to meet some of their colleagues, we also continued to host virtual activities periodically throughout the year with the intention of boosting morale and reinforcing the strong relationships among team members.

Key activities in 2021 included recruitment for key roles in lines of business and implementation of a new Human Resource Information System for reporting and records management.
In 2021, the organization realized one of its strategic objectives — to build on 2020’s Value Proposition Report with the release of the Case for Investment Report, available on an engaging and interactive platform.

Other 2021 highlights include:

Managing internal and external communications and events, including:

• hosting the SNOMED CT Expo 2021 Virtual Event, which drew +1,400 registrations;
• increasing engagement with Spanish-speaking users in Latin America and Europe through sponsorship activities, media partnerships and conference participation;
• dedicating social media campaigns to support organizational activities; and
• raising the organization’s profile through the publication of 22 news releases and blog posts to ensure that media releases/announcements translate to earned media, increased readership, and, ultimately, increased adoption.
FINANCIAL SNAPSHOT

The 2021 financial year end was closed out with a clean auditors report supported by robust internal controls, policies and procedures which are reviewed and updated as the organization evolves.

**SNOMED INTERNATIONAL INCOME AND EXPENDITURE REPORT (USD)**

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>12,816,183</td>
<td>12,019,519</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>(8,222,089)</td>
<td>(6,902,012)</td>
</tr>
<tr>
<td>Gross surplus</td>
<td>4,594,094</td>
<td>5,117,507</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>(2,913,425)</td>
<td>(2,823,747)</td>
</tr>
<tr>
<td>Operating surplus/(deficit)</td>
<td>1,680,669</td>
<td>2,293,760</td>
</tr>
<tr>
<td>Interest receivable and similar income</td>
<td>660</td>
<td>59,098</td>
</tr>
<tr>
<td>Surplus on ordinary activities before taxation</td>
<td>1,681,329</td>
<td>2,352,858</td>
</tr>
<tr>
<td>Taxation</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Surplus for the financial year</td>
<td>1,681,329</td>
<td>2,352,858</td>
</tr>
</tbody>
</table>

The financial information presented within this document does not comprise the statutory accounts of International Health Terminology Standards Development Organisation for the financial years ended 31 December 2021 and 31 December 2020 but represents extracts from them. These extracts do not provide in full, an understanding of the financial performance and position, or financial and investing activities, of the company as the complete Financial Statements.

The statutory accounts for those years have been reported on by the company’s auditor and delivered to the registrar of Companies House. The reports of the auditor were (i) unqualified, (ii) did not include a reference to any matters to which the auditor drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under section 498 (2) or (3) of the Companies Act 2006. The Financial Statements, including the auditor’s report, can be obtained free of charge on request to the company at One Kingdom Street, Paddington Central, London W2 6BD or by email to invoices@snomed.org.
SNOMED International is a “Members-First” organization. More specifically, our Members are national government agencies or other bodies that have been deemed suitable for the role by their respective national government. Their responsibilities and authority include appropriately establishing, monitoring, promoting or regulating concept-based systems of clinical terminology for that territory or country.

A key governance responsibility is the continued support of the organization’s senior stakeholder groups, including the General Assembly and Management Board. This, together with supporting the delivery of the various actions/projects stemming from the governance meetings, enabled SNOMED International to make good progress on a number of fronts.

**GENERAL ASSEMBLY**

The General Assembly is SNOMED International’s highest authority. The General Assembly ensures that the purpose, objects and principles of the Association are pursued and that the interests of the organization are safeguarded. The General Assembly can make binding decisions regarding all matters relating to SNOMED International, subject to and in accordance with the provisions of the Articles of Association.

**MEMBER FORUM**

The Member Forum acts as an advisory body to SNOMED International and optimizes collaboration and coordination among Member countries. It is co-chaired by an elected representative of the Member Forum and by a representative from SNOMED International.
### General Assembly and Member Forum Representatives

<table>
<thead>
<tr>
<th>Country</th>
<th>General Assembly (GA)</th>
<th>Member Forum (MF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>GA: Cintia Speranza</td>
<td>MF: Marina Zanetti and Guillermo Reynoso</td>
</tr>
<tr>
<td>Australia</td>
<td>GA: Steven Issa</td>
<td>MF: Elizabeth Donohoo</td>
</tr>
<tr>
<td>Austria</td>
<td>GA: Stefani Sabutsch</td>
<td>MF: Stefani Sabutsch and Stephan Rainer-Sablatnig</td>
</tr>
<tr>
<td>Belgium</td>
<td>GA: Tom Van Renterghem</td>
<td>MF: Katrien Scheerlinck and Ingrid Mertens</td>
</tr>
<tr>
<td>Canada</td>
<td>GA: Michael Green</td>
<td>MF: Linda Parisien and Andrea MacLean</td>
</tr>
<tr>
<td>Chile</td>
<td>GA: Rodrigo Martinez</td>
<td>MF: TBD</td>
</tr>
<tr>
<td>Cyprus</td>
<td>GA: Irena Rubešová</td>
<td>MF: Irena Rubešová and Miroslav Zvolšký</td>
</tr>
<tr>
<td>Denmark</td>
<td>GA: Jakob Due</td>
<td>MF: Camilla Wiberg Danielsen and Louise Bie</td>
</tr>
<tr>
<td>Estonia</td>
<td>GA: Kerli Linna</td>
<td>MF: Krista Kárt and Rutt Lindström</td>
</tr>
<tr>
<td>Finland</td>
<td>GA: Juha Mykkänen</td>
<td>MF: Jonna Salonen and Mikko Härkönén</td>
</tr>
<tr>
<td>Germany</td>
<td>GA: Stefanie Weber</td>
<td>MF: Christine Haas</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>GA: Vicky Fung</td>
<td>MF: Vicky Fung and Maggie Lau</td>
</tr>
<tr>
<td>Iceland</td>
<td>GA: Gudrún Audur Hardardóttir</td>
<td>MF: Gaur Sunder and Manisha Mantri</td>
</tr>
<tr>
<td>India</td>
<td>GA: Lav Agarwal</td>
<td>MF: Gaur Sunder and Manisha Mantri</td>
</tr>
<tr>
<td>Ireland</td>
<td>GA: Niail Sinnott</td>
<td>MF: Theresa Barry (Member Forum Chair)</td>
</tr>
<tr>
<td>Israel</td>
<td>GA: Boaz Lev</td>
<td>MF: Yael Appelbaum</td>
</tr>
<tr>
<td>Jordan</td>
<td>GA: Omar I Ayesh</td>
<td>MF: Afnan Jibril</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>GA: Beibut Yessenbayev</td>
<td>MF: Beibut Yessenbayev and Gulnara Akhmetova</td>
</tr>
<tr>
<td>Lithuania</td>
<td>GA: Martynas Bielauskas</td>
<td>MF: Martynas Bielauskas and Kristina Dieniene</td>
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<tr>
<td>Luxembourg</td>
<td>GA: Raffaella Vaccaroli</td>
<td>MF: Olivier Lepanto</td>
</tr>
<tr>
<td>Malaysia</td>
<td>GA: Nuraidah binti Marzuki</td>
<td>MF: Muhammad Naufal Bin Nordin and Ahmad Afram bin Rusti</td>
</tr>
<tr>
<td>Malta</td>
<td>GA: Hugo Agius-Muscat</td>
<td>MF: Hugo Agius-Muscat</td>
</tr>
<tr>
<td>Malta</td>
<td>GA: Herko Coomans</td>
<td>MF: Pim Volkert and Elize de Groot</td>
</tr>
<tr>
<td>Netherlands</td>
<td>GA: Alastair Kenworthy</td>
<td>MF: Alastair Kenworthy and Tracy Thompson</td>
</tr>
<tr>
<td>Norway</td>
<td>GA: Aithild Stokke (GA Vice Chair)</td>
<td>MF: Jørn Andre Jørgensen and Trine Angellskår</td>
</tr>
<tr>
<td>New Zealand</td>
<td>GA: Cátia Sousa Pinto</td>
<td>MF: Filippe Meala</td>
</tr>
<tr>
<td>Portugal</td>
<td>GA: Anaht Avanesyan</td>
<td>MF: Ruzanna Movsissy and Kristina Sargsyan</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>GA: Jung Jip Min</td>
<td>MF: Park, Hyeoun-Ae and Hwang, Hee</td>
</tr>
<tr>
<td>Slovakia</td>
<td>GA: Martina Bielauskas</td>
<td>MF: Martina Bielauskas and Kristina Dieniene</td>
</tr>
<tr>
<td>Singapore</td>
<td>GA: Priscilla Chua</td>
<td>MF: Adele Lee and Wong Jing Jing</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>GA: Pavol Rieger</td>
<td>MF: Monika Geletová and Eva Sabajová</td>
</tr>
<tr>
<td>Sweden</td>
<td>GA: Marcus Gry</td>
<td>MF: Lotti Barlow and Daniel Karlsson</td>
</tr>
<tr>
<td>Switzerland</td>
<td>GA: Adrian Schmid</td>
<td>MF: Pero Grgic and Annatina Foppa</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>GA: TBD</td>
<td>MF: TBD</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>GA: Alex Elias (General Assembly Chair)</td>
<td>MF: Emma Melhuish</td>
</tr>
<tr>
<td>United States of America</td>
<td>GA: Vivian Auld</td>
<td>MF: Vivian Auld and Patrick McLaughlin</td>
</tr>
<tr>
<td>Uruguay</td>
<td>GA: Rosario Berterreteche</td>
<td>MF: Rossana Occhiuzzi and Betania Arispe</td>
</tr>
</tbody>
</table>

**Note:** TBD indicates information that is not available or under review for publication.
The Management Board has legal and oversight responsibility for the management and direction of SNOMED International. The terms of the appointments are staggered: the longest term is three years; the shortest, one year and terms are subject to a maximum service of six years in total. Management Board appointments are non-executive director positions which carry legal responsibility for the governance of the organization.

2021 MANAGEMENT BOARD MEMBERS >>
Advisory Groups conduct specific activities that contribute to SNOMED International’s mandate. These agile groups adapt to meet the changing needs and direction of the organization.

**Content managers (CMAG)**

**E-learning (ELAG)**

**Modeling (MAG)**

**Editorial (EAG)**

**Terminology release (TRAG)**

**Tooling user (TUAG)**
Clinical Reference Groups (CRGs) facilitate discussion between clinicians focused on specific clinical specialties or topic areas and SNOMED International. The groups are open and transparent, and support input from beyond the clinical specialty area, e.g. clinicians, interested vendors and information specialists.

Linked to the CRGs are clinical project groups focused on delivering agreed work items and editorial groups (providing clinical validation for derivative products).
Client:
Show:
Name:
Notes:
SNOMED
HIMMS 21
Tower A - Booth Side Template
• Quantity: 1
• Printed Fabric Graphic
• 77-15/16" Wide x 134-1/8" high
• 2" Bleed on all sides

77-15/16" 81-15/16" 134-1/8" 138-1/8"