

# A Collaborative Approach to Deliver Global Interoperability

## ABOUT SNOMED INTERNATIONAL

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.

### VISION

By 2025, Clinical Terminologies will be used globally, which will result in better health and improved patient outcomes, supported by one language of health.

### MISSION

SNOMED International sustainably produces a global clinical vocabulary and other services that enables the clear exchange and analysis of health information for all.

## 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

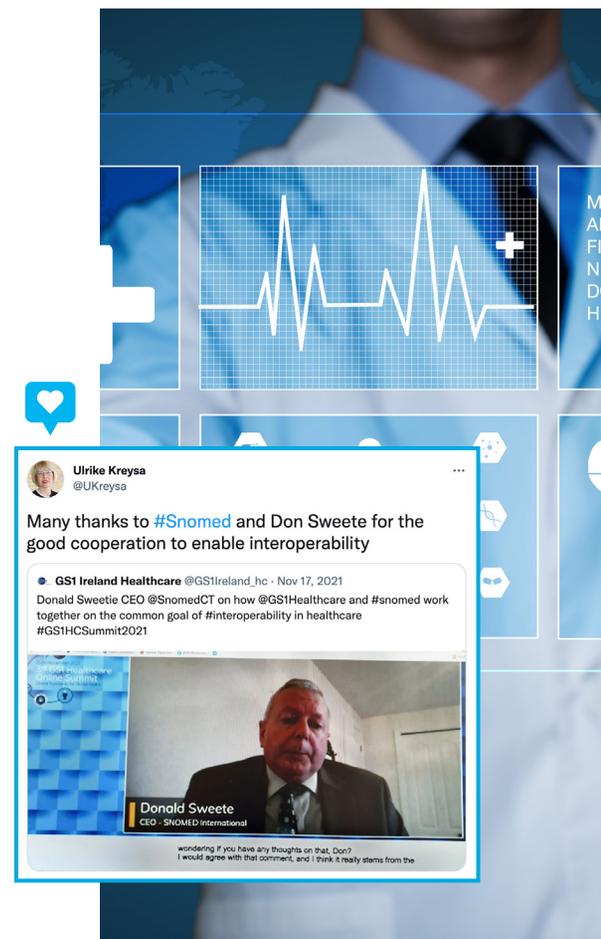


## MESSAGE FROM THE GENERAL ASSEMBLY CHAIR, MANAGEMENT BOARD CHAIR AND CEO (CONTINUED)

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

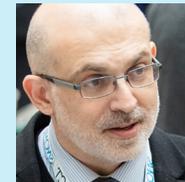


## MESSAGE FROM THE GENERAL ASSEMBLY CHAIR, MANAGEMENT BOARD CHAIR AND CEO (CONTINUED)

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.



Alex Elias, Chair  
SNOMED International  
General Assembly

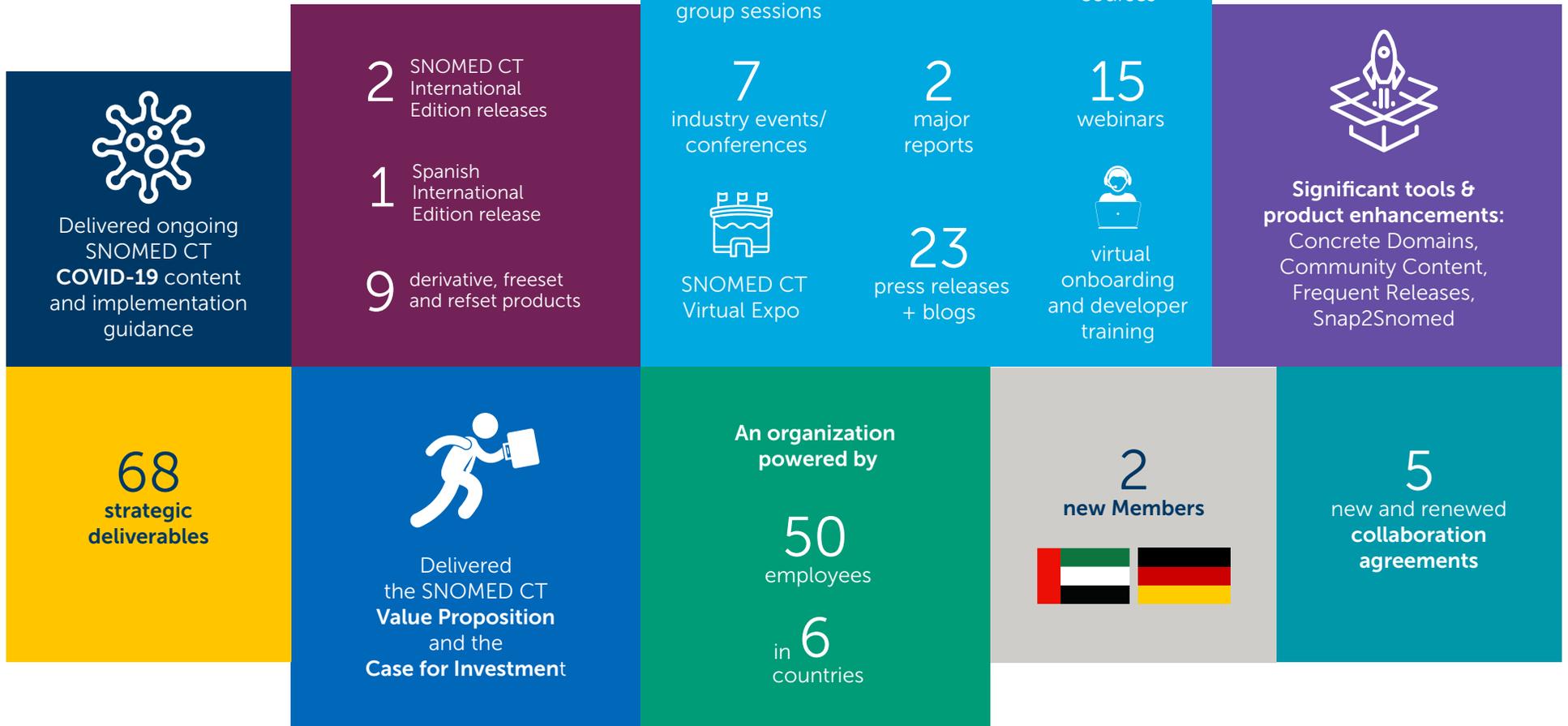


Joanne Burns, Chair  
SNOMED International  
Management Board



Don Sweete, CEO  
SNOMED International

# 2021 SUMMARY



# 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.

[Our 2020-2025 Strategy](#)



## 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

## 2020-2025 STRATEGY by the numbers

5  
years

159  
deliverables

6  
priorities

19  
strategic  
success criteria

3  
strategic  
directions

68  
strategy  
deliverables  
in 2021

Learn more  
about the  
five year  
strategy



**MEMBER SUCCESS STORY:**

EUROPE, MIDDLE EAST AND AFRICA

GERMANY BUILDS A STRONG E-HEALTH  
FOUNDATION WITH SNOMED CT

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.



Learn more  
about Germany's  
membership  
in SNOMED  
International



# OUR MEMBERS

## Europe, Middle East and Africa

Austria	Finland	Jordan	Norway	Spain
Belgium	Germany	Lithuania	Portugal	Sweden
Cyprus	Iceland	Luxembourg	Republic of Slovenia	Switzerland
Czech Republic	Ireland	Malta	Saudi Arabia	United Arab Emirates
Denmark	Israel	Netherlands	Slovak Republic	United Kingdom
Estonia				

## Americas

- Argentina
- Canada
- Chile
- United States
- Uruguay

## Asia Pacific

- Australia
- Brunei
- Hong Kong, China
- India
- Kazakhstan
- Malaysia
- New Zealand
- Republic of Armenia
- Republic of Korea
- Singapore

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## OUR MEMBERS

# A GROWING ORGANIZATION

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.



**Dr. Andrzej Rys**

Director, Health Systems, Medical Products and Innovation - Directorate-General for Health and Food Safety, European Commission

**Laying the groundwork for European-wide interoperability through the EU agreement**



**Learn more about our new Members in 2021**

	<b>Germany</b> 
	<b>UAE</b> 





**Policy environment in Germany**

## 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, freeset 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.



PRODUCTS AND SERVICES

# NOTABLE 2021 PRODUCTS AND SERVICES HIGHLIGHTS

## SNOMED CT: FREQUENT RELEASES

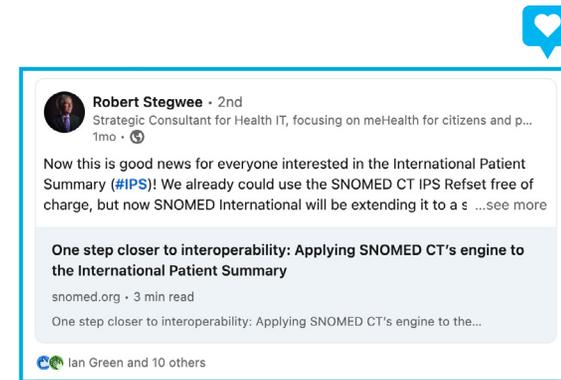
In 2021, SNOMED International began to pilot a more frequent delivery schedule of the SNOMED CT International Release Package, rather than the end of each January and July. Making the product available on a monthly basis means less down-time required between release cycles, enabling faster turnaround 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.

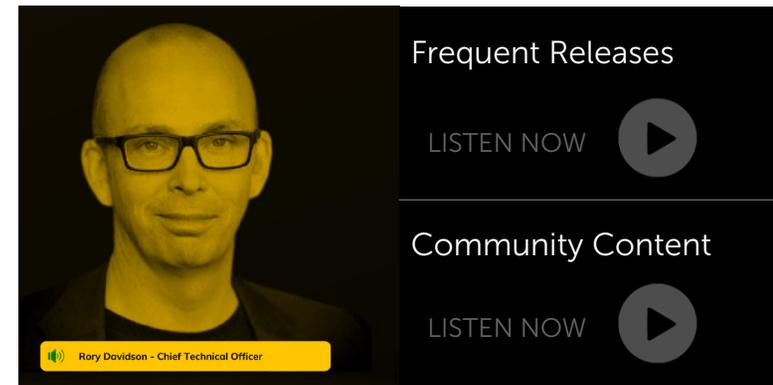


**Robert Stegwee** · 2nd  
Strategic Consultant for Health IT, focusing on meHealth for citizens and p...  
1mo · 🌐

Now this is good news for everyone interested in the International Patient Summary (#IPS)! We already could use the SNOMED CT IPS Refset free of charge, but now SNOMED International will be extending it to a s ...see more

**One step closer to interoperability: Applying SNOMED CT’s engine to the International Patient Summary**  
snomed.org · 3 min read  
One step closer to interoperability: Applying SNOMED CT’s engine to the...

🌐 Ian Green and 10 others



**Frequent Releases**

LISTEN NOW 

**Community Content**

LISTEN NOW 

 **Rory Davidson - Chief Technical Officer**

**Learn more about concrete domains** 

## NOTABLE 2021 PRODUCTS AND SERVICES HIGHLIGHTS

### 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

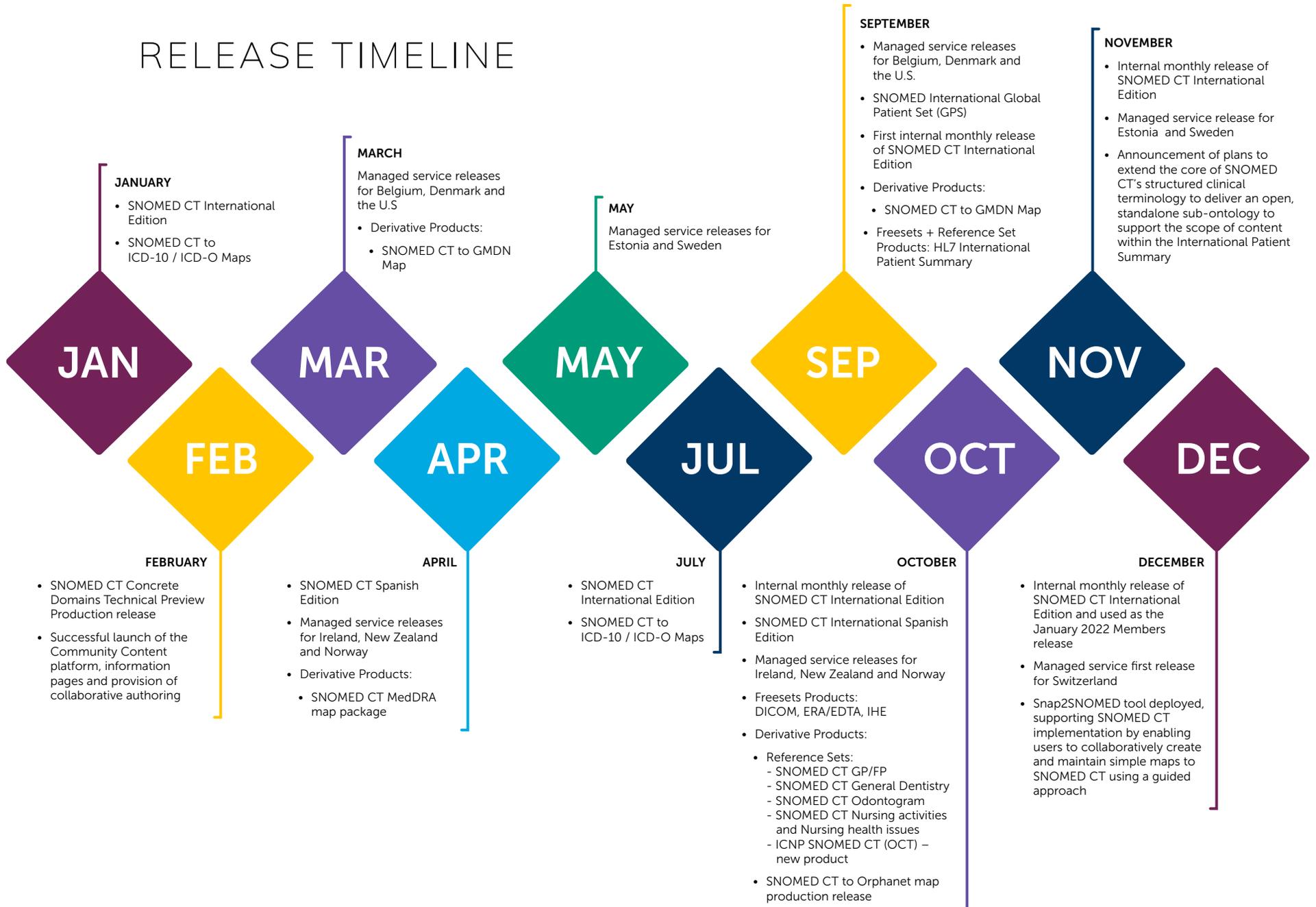
In 2021 we laid the groundwork to enhance implementation support services to assist a range of stakeholders, including National Release Centres, healthcare providers, research organizations and vendors, with their implementations of SNOMED CT, and to develop resources to support the adoption, implementation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



Learn more  
about the  
GPS



# RELEASE TIMELINE



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



PRODUCTS + SERVICES

CONTENT ENHANCEMENTS



**SOCIAL DETERMINANTS OF HEALTH (SDoH)  
AND SOCIAL CARE**

- 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



PRODUCTS + SERVICES

# CONTENT PARTNERS AND COLLABORATIONS

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.

Learn more about the collaboration agreement with the Academy of Nutrition and Dietetics 

Learn more about the ICNP refset release 

Learn more about our collaboration agreement with the American Academy of Periodontology and the European Federation of Periodontology 

## Our Collaboration Partners



**Suzy Roy**  
*Collaboration Specialist and Customer Lead, Americas*



**Jane Millar**  
*Collaboration Lead - Consultant*

LISTEN NOW 

Learn more about our collaboration partners 

PRODUCTS + SERVICES

# CONTENT PARTNERS AND COLLABORATIONS



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



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

[Learn more](#) →



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

[Learn more](#) →



- 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



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



Approx. 1,400 concepts included in January and July 2021 releases, contributing updates to the ICD-10 Map



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

[Learn more](#) →



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



Renewed our longstanding agreement to publish a SNOMED CT Freset of coded concepts in the Digital Imaging and Communications in Medicine (DICOM) Standard



- 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

**MEMBER SUCCESS STORY:**

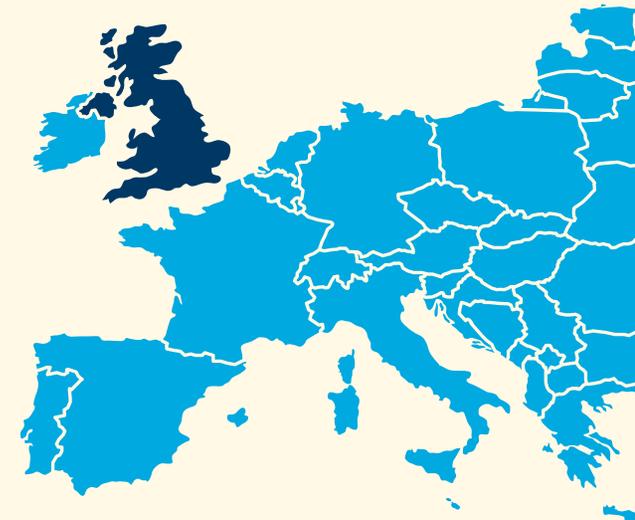
EUROPE, MIDDLE EAST AND AFRICA

## 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.



Learn more  
about  
SNOMED CT  
use in the UK



# ADOPTION

## THE CASE FOR INVESTMENT IN SNOMED CT

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.



Learn more about the Case for  
Investment in SNOMED CT at  
[value.snomed.org](https://value.snomed.org)



## ADOPTION

# ENGAGING OUR STAKEHOLDERS

### 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.



Learn more  
about our  
Americas  
activities



Learn more  
about our  
Asia Pacific  
activities



## 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.



Learn more  
about our  
Europe  
activities



Learn more  
about our  
Middle East  
& Africa  
activities



Learn more  
about The  
Sovereignty  
Network



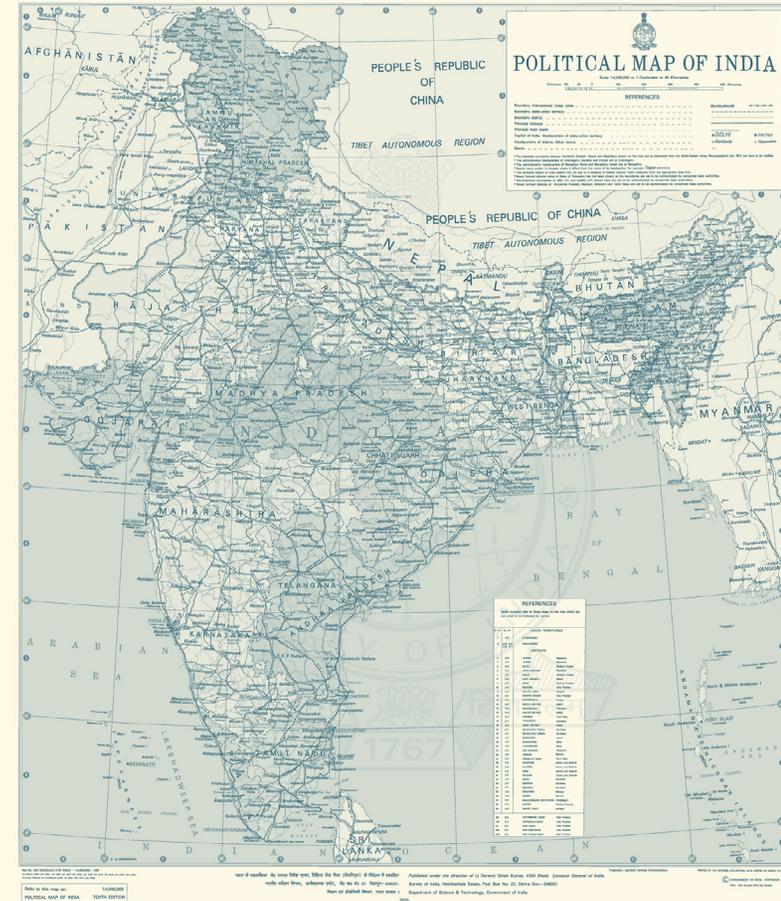
**MEMBER SUCCESS STORY:**

ASIA

# 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.

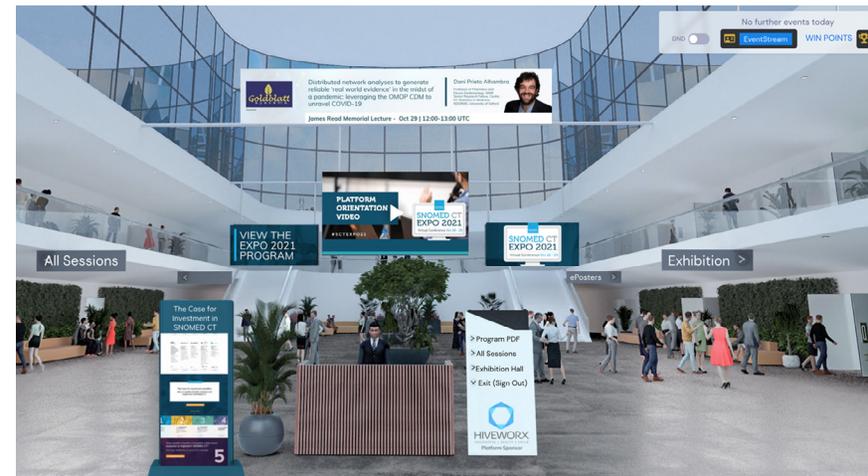


**Learn more about the eHealth Kerala project**

ENGAGING 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.



**EXPO 2021 highlights and SNOMED CT Expo 2021 YouTube playlist**



## 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.

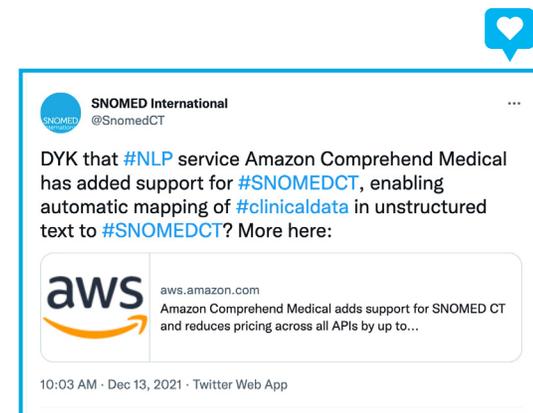
Two of our main 2021 achievements in this area include forging partnerships with vendors to extend usage of SNOMED CT within their products, and pursuing a Member partner for an analytics pilot and other partners for precision medicine initiatives.

**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.

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.

Visit the  
Vendor  
Marketplace



## 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.



Learn more  
about Clinical  
Reference  
Groups



Learn more  
about  
SNOMED CT  
research  
engagement



## ENGAGING OUR STAKEHOLDERS

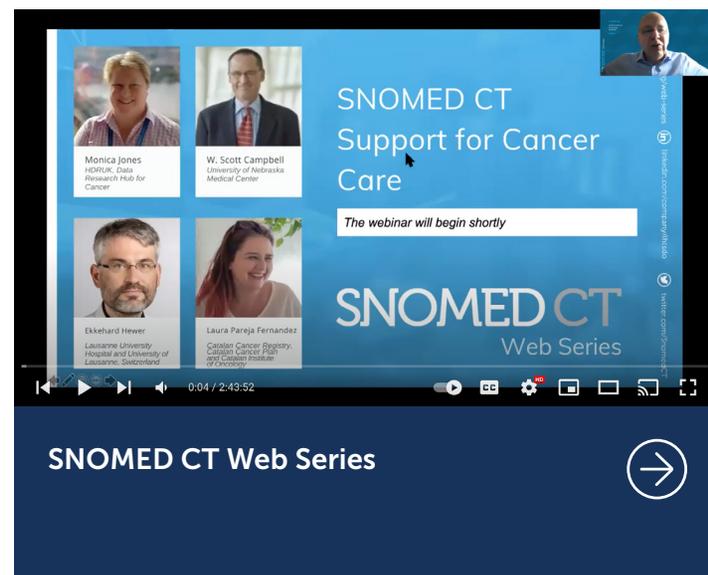
# PRIORITIZING OUR CLINICAL, RESEARCH AND IMPLEMENTATION COMMUNITIES

**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.



Learn more  
about  
SNOMED CT  
implementation  
support portal



Learn more  
about the  
user support  
reference  
group



**MEMBER COLLABORATION STORY:**  
AMERICASCANADA 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.



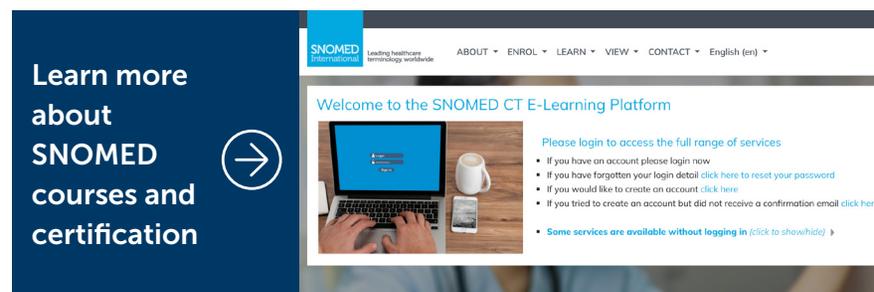
# EDUCATION AT SNOMED INTERNATIONAL

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

2923

SNOMED CT Foundation  
Course (English)

191

SNOMED CT Authoring  
Level 1 Course

280

Curso de Fundamentos  
(Spanish)

61

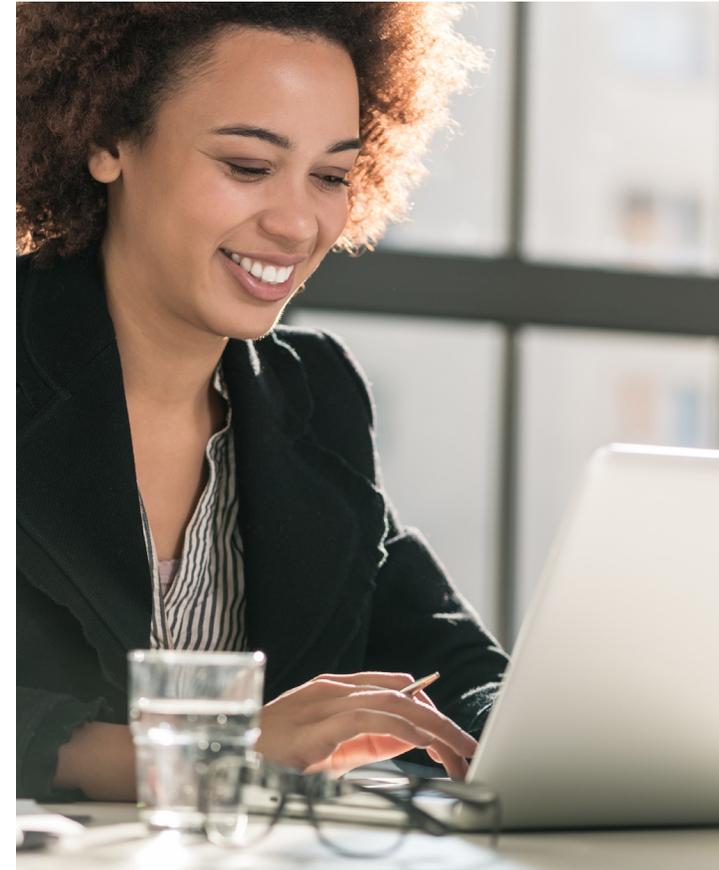
SNOMED CT Authoring  
Level Certification

656

SNOMED CT  
Implementation Course

33

SNOMED CT Terminology  
Services Certification  
Course



Learn more  
about  
SNOMED  
courses and  
certification



# INNOVATION

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.

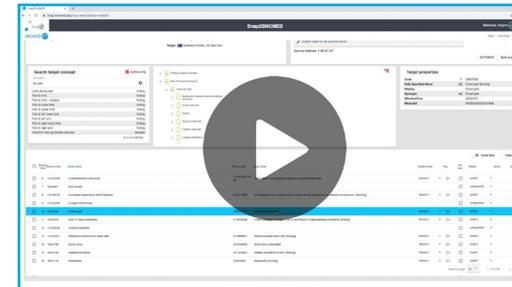
2021 was marked by further strengthening of our partnerships with academic, research, industry and clinical organizations to continue to advance our innovation-focused activities and achieve the innovation-specific strategic goals we set out for that year.



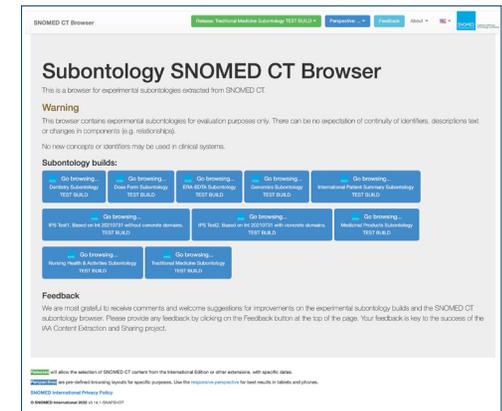
# INNOVATION

## 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.



Learn more about Snap2SNOMED



**SNOMED International committed to creating and releasing an openly available IPS sub-ontology in the first half of 2022 to enhance the existing cross border movement of information**

**MEMBER SUCCESS STORY:**  
AMERICAS

## 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.

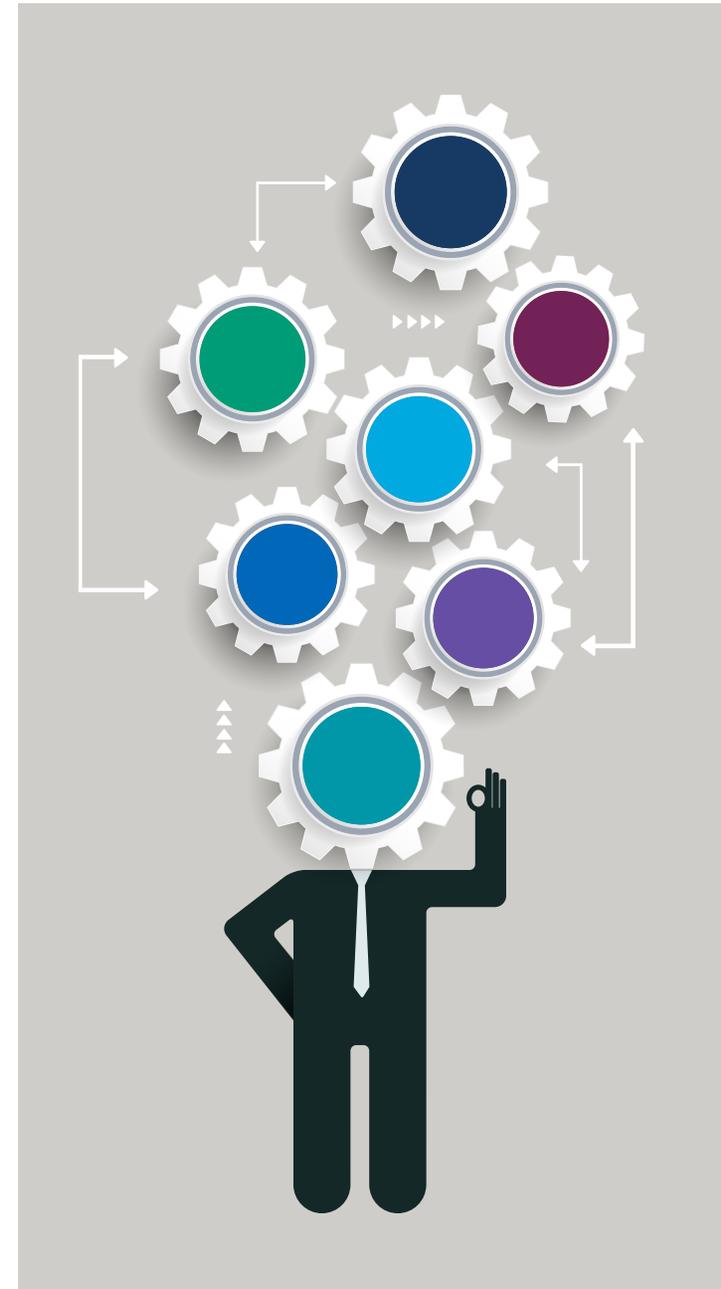


## ENABLING SUCCESS

### 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.



## ENABLING SUCCESS

STRONG COMMUNICATIONS  
WITH STAKEHOLDERS

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.



Join the  
SNOMED CT  
community

 LinkedIn

 Twitter

 YouTube

## 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)

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

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](mailto:invoices@snomed.org).

# GOVERNANCE

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

 Argentina	GA: Cintia Speranza MF: Marina Zanetti and Guillermo Reynoso	 Estonia	GA: Kerli Linna MF: Krista Kärt and Rutt Lindström	 Lithuania	GA: Martynas Bieliauskas MF: Martynas Bieliauskas and Kristina Dienine	 Saudi Arabia	GA: Waleed Albahli MF: TBC
 Australia	GA: Steven Issa MF: Elizabeth Donohoo	 Finland	GA: Juha Mykkänen MF: Jonna Salonen and Mikko Härkönen	 Luxembourg	GA: Raffaella Vaccaroli MF: Olivier Lepanto	 Singapore	GA: Priscilla Chua MF: Adele Lee and Wong Jing Jing
 Austria	GA: Stefan Sabutsch MF: Stefan Sabutsch and Stephan Rainer-Sablatnig	 Germany	GA: Stefanie Weber MF: Christine Haas	 Malaysia	GA: Nuraidah binti Marzuki MF: Muhammad Naufal Bin Nordin and Ahmad Aqram bin Rusli	 Slovak Republic	GA: Pavol Rieger MF: Monika Geletová and Eva Sabajová
 Belgium	GA: Tom Van Renterghem MF: Katrien Scheerlinck and Ingrid Mertens	 Hong Kong	GA: Vicky Fung MF: Vicky Fung and Maggie Lau	 Malta	GA: Hugo Agius-Muscat MF: Hugo Agius-Muscat	 Spain	GA: Francisco José Sánchez Laguna MF: Belén Delgado Díez and Jorge Rangil López
 Brunei	GA: TBD MF: TBD	 Iceland	GA: Guðrún Audur Hardardóttir MF: Gudrun Audur Hardardottir and Ingi Steinar Ingason	 Netherlands	GA: Herko Coomans MF: Pim Volkert and Elze de Groot	 Sweden	GA: Marcus Gry MF: Lotti Barlow and Daniel Karlsson
 Canada	GA: Michael Green MF: Linda Parisien and Andrea MacLean	 India	GA: Lav Agarwal MF: Gaur Sunder and Manisha Mantri	 New Zealand	GA: Alastair Kenworthy MF: Alastair Kenworthy and Tracy Thompson	 Switzerland	GA: Adrian Schmid MF: Pero Grgic and Annatina Foppa
 Chile	GA: Rodrigo Martinez MF: TBD	 Ireland	GA: Niall Sinnott MF: Theresa Barry (Member Forum Chair)	 Norway	GA: Alfhild Stokke (GA Vice Chair) MF: Jørn Andre Jørgensen and Trine Angelskår	 United Arab Emirates	GA: TBD MF: TBD
 Cyprus	GA: Vasos Scoutellas MF: Vasos Scoutellas	 Israel	GA: Boaz Lev MF: Yael Applbaum	 Portugal	GA: Cátia Sousa Pinto MF: Filipe Mealha	 United Kingdom	GA: Alex Elias (General Assembly Chair) MF: Emma Melhuish
 Czech Republic	GA: Irena Rubešová MF: Irena Rubešová and Miroslav Zvolský	 Jordan	GA: Omar I Ayesb MF: Afnan Jebri	 Armenia	GA: Anahit Avanesyan MF: Ruzanna Movsisyan and Kristina Sargsyan	 United States of America	GA: Vivian Auld MF: Vivian Auld and Patrick McLaughlin
 Denmark	GA: Jakob Due MF: Camilla Wiberg Danielsen and Louise Bie	 Kazakhstan	GA: Beibut Yessenbayev MF: Beibut Yessenbayev and Gulnara Akhmetova	 Republic of Korea	GA: Jung Jip Min MF: Park, Hyeoun-Ae and Hwang, Hee	 Uruguay	GA: Rosario Berterretche MF: Rossana Occhuzzi and Betania Arispe
				 Slovenia	GA: Alen Vrecko MF: Alen Vrecko		

GOVERNANCE

# MANAGEMENT BOARD

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 >>**

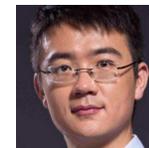
Learn more about  
SNOMED  
International's  
Management  
Board



Joanne Burns  
(Appointed Chair in September 2020)



Hadas Bitran  
(Appointed October 2020)



Mengchun Gong  
(Appointed April 2017)



Michael Lewis  
(Appointed October 2020)



Matic Meglic  
(Appointed April 2017)



Andrew Roddam  
(Appointed October 2020)

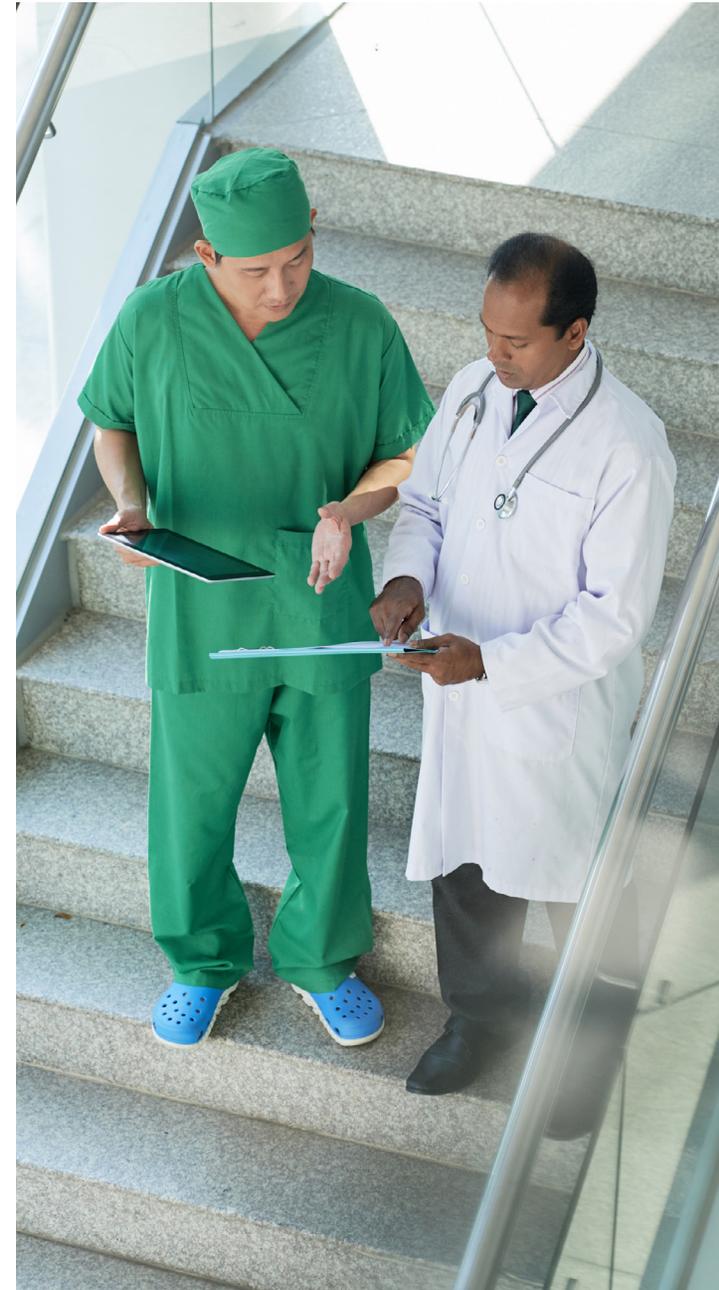


Isabelle de Zegher  
(Appointed October 2020)

## GOVERNANCE

## ADVISORY GROUPS

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 \(TUAG\) →](#)

GOVERNANCE

# CLINICAL REFERENCE AND PROJECT GROUPS

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).

## Clinical Reference Groups

- Allergies/Hypersensitivity and Intolerance →
- Anesthesia →
- Cancer Synoptic Reporting →
- Dentistry →
- Genomics and Precision Medicine →
- Mental and Behavioural Health →
- Nursing →
- Nutrition Care Process Terminology →
- Pathology and Laboratory Medicine →

## Project Groups

- Diabetes →
- French Translation Collaboration →
- Event, Condition and Episode Model →
- Medical Procedures →
- Observable and Investigation Model →
- SNOMED CT Computable Languages →
- SNOMED on FHIR →
- Traditional Medicine →
- Translation User Group →

Learn more  
about Clinical  
Reference and  
Project Groups →

