

Overview of horizon scanning processes for medical technologies: rationale and requirements

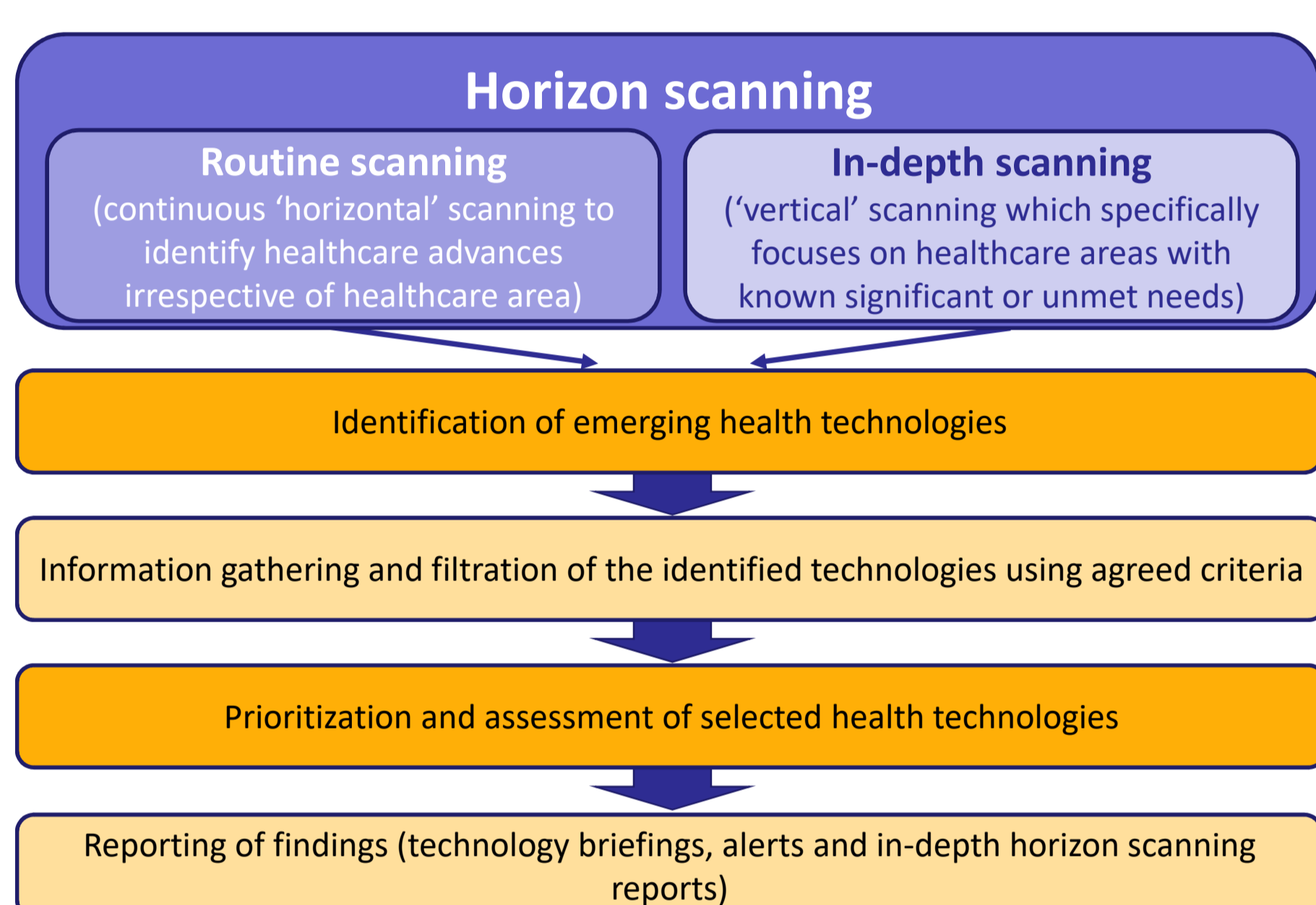
Shkun Chadda, Caroline Upton, Annekathrin Moeller
SIRIUS Market Access Ltd, London, UK; email info@siriusmarketaccess.com

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Introduction

Horizon scanning is an early awareness or alert system that provides healthcare policy-makers with information about new and emerging health technologies and their potential impact on health services and existing health technologies (1). This enables decision-makers to predict costs and to prepare the national budgets and resources required for reimbursement of the health technology. Figure 1 shows the methodology commonly used by horizon scanning agencies.

Figure 1: The horizon scanning process



The information requested by horizon scanning agencies includes some or all of the following: indication, mechanism of action, epidemiology, likely comparator products, potential product benefits, costs of product and comparators, estimated net budget impact, information and service implications. Areas most commonly covered by horizon scanning processes are shown in Table 1.

Table 1: Data required by horizon scanning agencies

Data required	USA	Canada	UK	Italy	Spain	France	Germany
Safety	✓	✓	✓	✓	✓	✓	✓
Potential for significant health service impact	✓	✓	✓	✓	✓	✓	✓
Clinical effectiveness	✓	✓	✓	✓	✓	✓	✓
Regulatory status	✓	✓	✓	✓	✓*	✓	✓
Other impacts (e.g. legal, social, ethical)	✓	✓	✓	✓	✓	✓	✓

* Spain has multiple horizon scanning agencies, only some of which require data regarding regulatory status.

Different horizon scanning agencies identify emerging technologies at different times. Some gather information once Phase 3 trials have been initiated whereas others collect information 1–3 years before expected market entry. The agencies also differ in terms of the health technologies that are assessed (e.g. drugs, devices, procedures). Timings for assessments are summarized in Figure 2.

Figure 2: Stage in technology lifecycle for assessment

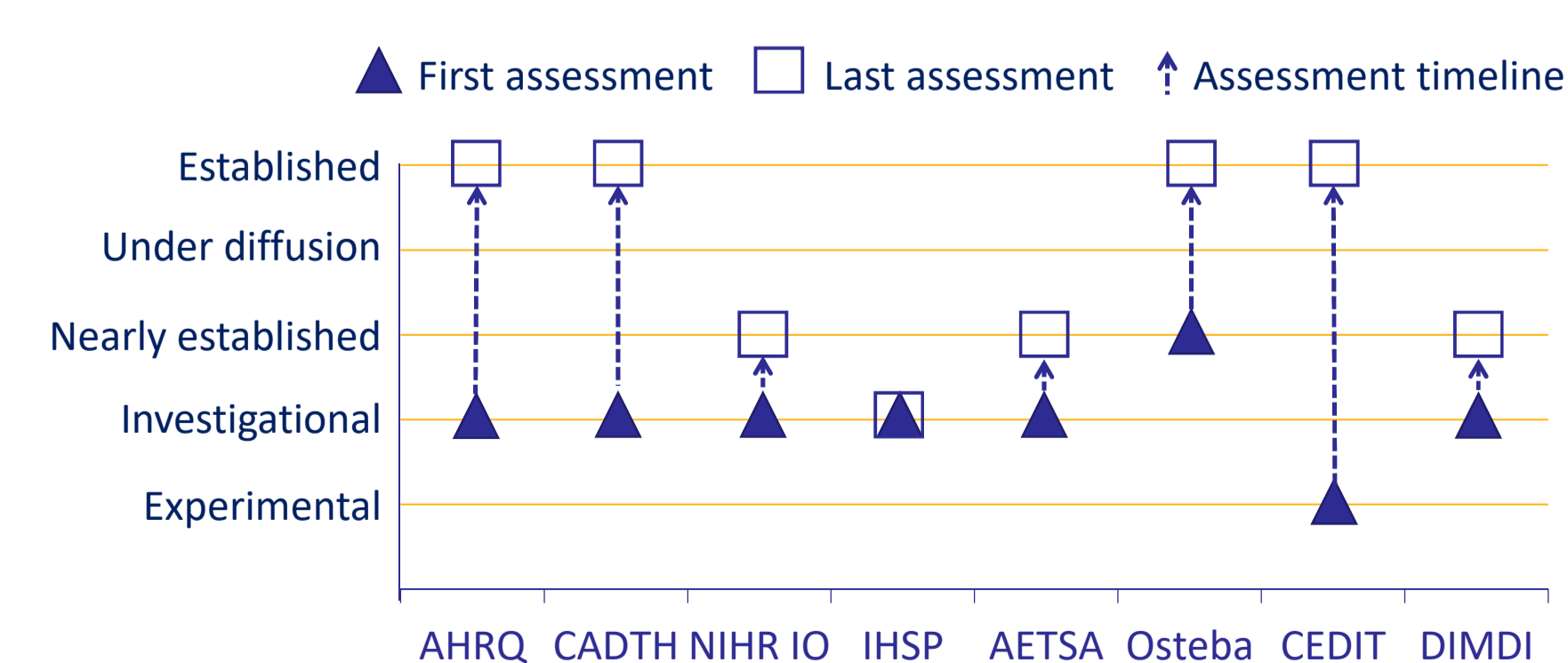


Figure adapted from Packer et al. (2015)

Country-specific examples

The US Agency for Healthcare Research and Quality (AHRQ) healthcare horizon scanning program used to capture interventions that were likely to diffuse into clinical practice within the next 2–3 years, and track the diffusion of identified interventions for about 2 years after they had become available for clinical practice. The program was discontinued in 2015 but its relaunch is currently being considered (2).

The Canadian Agency for Drugs and Technologies in Health's (CADTH) horizon scanning program identifies and monitors emerging health technologies that are not yet licensed, not yet widely available, or not in routine clinical use in Canada, but are likely to have an impact on the delivery of healthcare. Technologies that are not yet licensed are typically expected to be approved from Health Canada within 6–18 months of submission (3).

The UK's National Institute for Health Research Innovation Observatory (NIHR IO; formerly Horizon Scanning Research and Intelligence Centre [HSRIC]) aims to provide key policy-makers with advance notice of selected new and emerging health technologies that might require evaluation, consideration of clinical and cost impacts, or modification of clinical guidance 2–3 years before adoption by the National Health Service (1).

The Italian Horizon Scanning Project (IHSP) identifies, filters, and prioritizes emerging drugs for which a European marketing authorization (MA) is expected within 12–36 months. The New Product Information Report, issued 12 months before the MA, reports critically on safety and efficacy, possible level of innovation, place in therapy, and social and economic impact (4).

Spain has multiple regional horizon scanning agencies, including the Agencia de Evaluación de Tecnologías Sanitarias de Andalucía (AETSA) and the Basque Office for Health Technology Assessment (Osteba). AETSA identifies emerging technologies at an investigational level whereas Osteba assesses technologies before their adoption in the Basque health system (5).

The French Comité d'Évaluation et de Diffusion de Innovations Technologiques (CEDIT) is a hospital-based health technology assessment (HTA) agency, that formulates recommendations and creates early awareness for the senior management of the Paris University Hospital (Assistance Publique – Hôpitaux de Paris; AP-HP). Its horizon scanning program identifies and anticipates the technologies with an impact (clinical, economical, organizational) on the hospital (6).

The German Institute of Medical Documentation and Information (DIMDI) focuses its horizon scanning activities on the detection and description of technologies prior to MA. This includes their weighting relative to other technologies, and a description of further technologies relating to these (7).

EuroScan

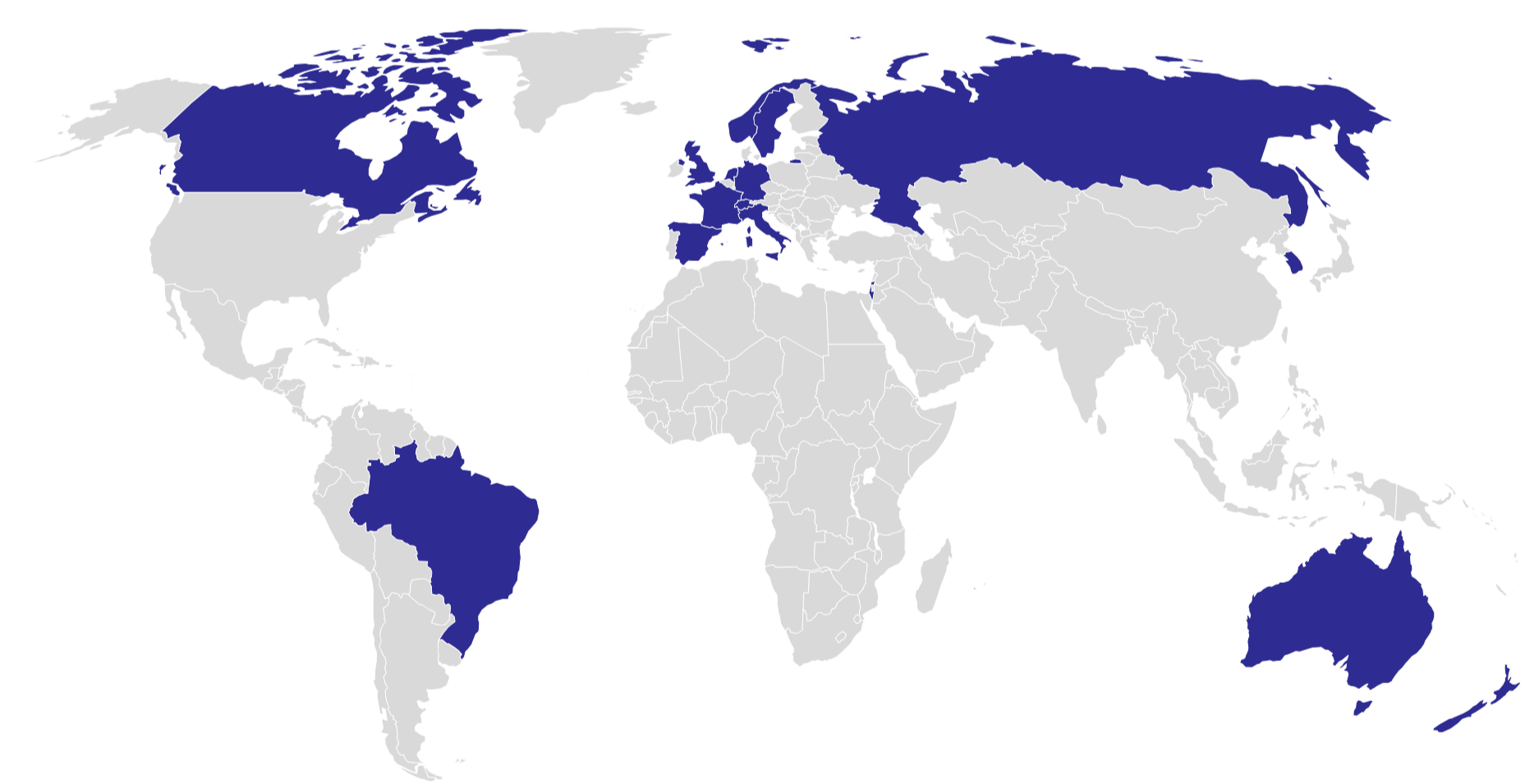
The EuroScan International Network of horizon scanning agencies aims to exchange information on important emerging drugs, devices, procedures, programs, and settings in healthcare.

Membership is open to any non-profit organization that is developing or has an ongoing horizon scanning program, has an officially recognized role in relation to regional or national government, is at least 50% funded from public sources, and has no link, other than scientific, with commercial companies or research and development (R&D) centers (8). The EuroScan goals are:

- * To strengthen activities for the development of methodological approaches.
- * To improve the exchange of information.
- * To increase the impact of EuroScan International Network's output.
- * To identify relevant not-for-profit public partners in order to share results.
- * To advise not-for-profit organizations within public administrations who wish to consider the establishment of early awareness and alert activities.

The EuroScan International Network currently comprises agencies from Spain, Italy, France, Germany, the Netherlands, the UK, Sweden, Norway, Switzerland, Israel, Canada, Russia, Australia, New Zealand, Brazil, and South Korea (Figure 3).

Figure 3: Current members of the EuroScan International Network



Customers of EuroScan members include national and regional governments, healthcare providers, insurance or reimbursement organizations, national R&D programs, and members of the public (1).

Conclusions

- * Many horizon scanning agencies share similar goals and stakeholders.
- * Horizon scanning agencies in different countries collate information on emerging technologies at different times.
- * Manufacturers should proactively engage with horizon scanning agencies to allow reimbursement and HTA agencies to optimally prepare for the introduction of new healthcare technologies.
- * This increases the likelihood of patients with unmet needs gaining timely access to new technologies.

References

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