

Where Digital Health Thrives: Future Skills Needs



Connected Health Skillnet

- Connected Health Skillnet is an enterprise-led learning and development Network for digital health skills development.
- Led by a cross-sectoral industry Steering Committee and co-funded by **Skillnet Ireland**.
- **Vision:** *“To support the development of a worldclass, multidisciplinary digital health talent pool in Ireland through industry-led and grant subsidised training and development”.*
- The Ibec **‘Where Digital Health Thrives’** campaign recognises **“the development of a worldclass talent pool”** as a key strategic priority to enable Ireland to become a recognised global hub for digital health.



200+
companies

1000+
trainees

Our objective

Connected Health Skillnet and **Irish Medtech Association**, supported by **Skillnet Ireland**, commissioned **HealthXL** to conduct a skills needs analysis for digital health.

The objectives of this report are threefold:

1. To identify and benchmark the digital health roles and associated skillset needed for the medtech, pharma and start up sectors.
2. To provide expert-led insights on current and future skill demands for the industry in Ireland
3. To inform the development of grant-funded digital health training programmes to be delivered by Connected Health Skillnet, and other educational institutions.

Methodology



968 digital health profiles from the health tech industry were analysed to provide insight into the types of roles and skills required in digital health. This was leveraged to build the digital health skills framework.

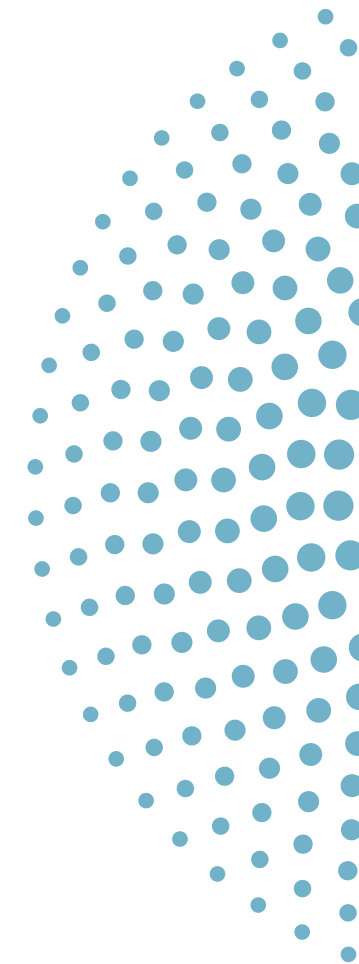


Three roundtables and numerous one-to-one interviews with experts from Ireland, the US, as well as UK, to further develop, and validate the novel skills framework.



Two industry surveys, based on the digital health skills framework, were conducted internationally and nationally to determine demand.

A total **170** thought leaders contributed to the skills needs analysis.



Main takeaways

Health technology companies in Ireland clearly see the potential for growth through digital health.

- In medtech this includes connected devices, and remote monitoring.
- In pharma it spans how drugs are discovered and developed, and gathering real world data on efficacy.

87%

Irish companies surveyed - large and small - planning to increase their digital health activity over the next four years, and they intend to invest.

9/10

Nearly 9 out of 10 (87%) respondents said their Irish operation will play a key role in their digital health activities.

1,901

digital health roles are anticipated to be added over the next four years by 36 of the Irish businesses consulted in the research.



Connected
Health

Skillnet

Main takeaways (continued)

- **Many of the key digital health roles and functions** needed across medtech, biopharma and digital health companies **are still being defined,**
- **The majority of digital health role at present are in the area of ‘digital and broad innovation’ with a focus on strategy and partnership building.**

82% of companies surveyed have partnered with other businesses to develop digital health solutions



A snapshot of digital health roles



Main takeaways (continued)

- **The Irish digital health sector is uniquely focused on digital R&D** as a key priority for upskilling.
- **Ireland is already ahead** for availability of essential skills in **software development, advanced data analytics and information management / cybersecurity**.
- Anticipated areas of greatest skills demand (4 years) are:



Product design &
user experience

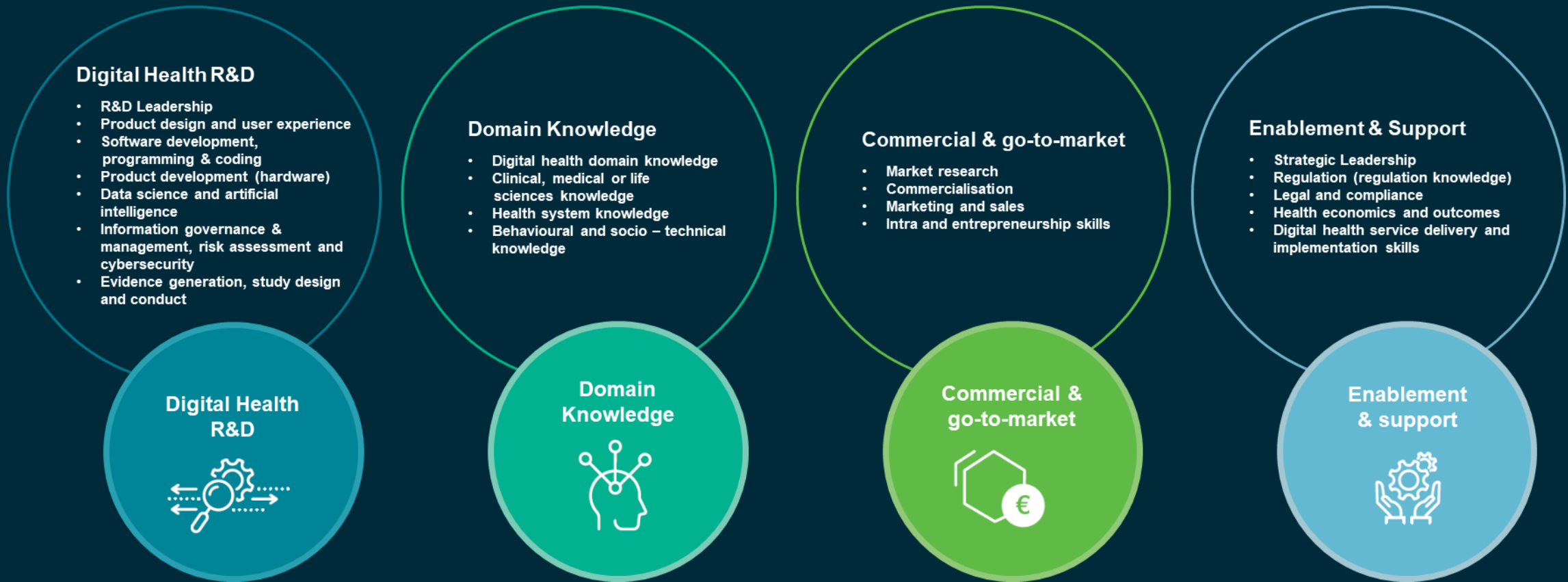


Software
development,
programming &
coding



Data science &
artificial intelligence

Digital Health Skills Framework | Macro Level

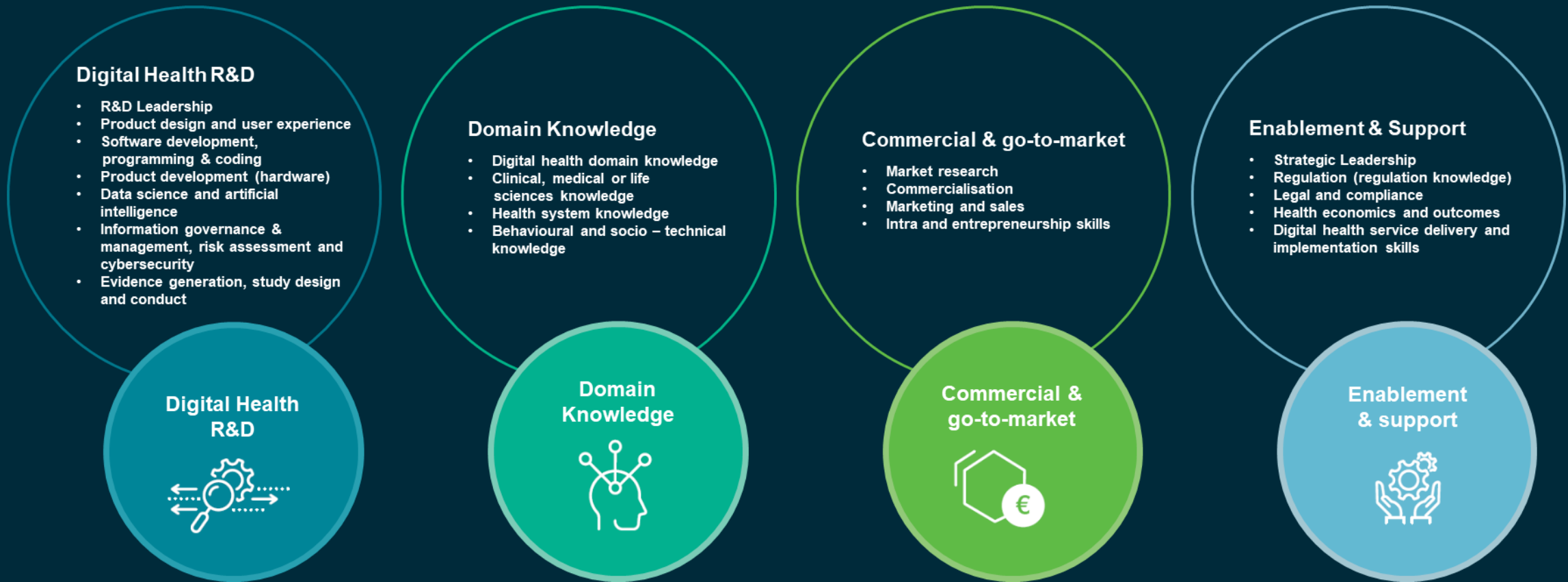


Digital Health Skills Framework (continued)

<i>Macro skill</i>	Expert validated <i>meso skill</i>	<i>Micro skill example</i>
Data science and artificial intelligence	Neural networks and reinforcement learning	Tensorflow Pytorch

- **Macro:** The broad skills and expertise needed under digital health R&D; domain knowledge; commercial & go-to-market; enablement & support
- **Meso:** Breakdown of the *macro skill* in key competencies and knowledge areas
- **Micro:** A more granular breakdown of *meso skill* to include usage of specific tools, methodologies, knowledge of specific regulations etc.

Digital Health Skills Framework | Macro Level



Recommendations

Double down on essential R&D competencies:

1 Define a career path for STEM graduates and incorporate digital health into our STEM curriculum:

Attract, develop, and retain STEM graduates to the healthtech industry, while equipping them to achieve their potential by enhancing existing courses with digital health modules in strategic areas.

2 Deliver on demand upskilling to keep pace with change:

Both the business and policy landscape is evolving rapidly with technological advances also spurring on change. Continuous professional development is necessary to keep pace with ongoing changes, notably in areas such as regulatory affairs and reimbursement.

Recommendations

3 Increase digital health domain knowledge and established a common language:

Depth of understanding in areas such as digital health, clinical, and health systems is a core competency for digital health. Moreover, as digital health professionals come from different strategic sectors with people having a background in tech, software, engineering, telecoms etc, a common language is need to foster understanding.

4 Enable partnerships in the short term:

Digital health is underscored by partnerships with collaboration seeing specialists work together on the development and delivery of digital health products and solutions. Given the depth and breadth of Ireland's ecosystem we're well placed to leverage our culture to bring partners together.

Recommendations

5 Establish and support a community of best practice:

The healthtech community in Ireland includes leaders with international influence, serial entrepreneurs, key opinion leaders, along with a range of business supports. This facilitates knowledge sharing in digital health for success.



Contact us

Thank You



To find out more about industry-led digital health training / join our skills Steering Committee contact:

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Thank You

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