



Eindhoven MedTech Innovation Center



QUALITY OF LIFE

a fast track to clinical innovation

e/MTIC STRATEGIC PAPER-SUMMARY **2020-2024**

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e/MTIC Strategy 2020-2024 - summary

1. Vision & mission

Fast implementation of dedicated high-tech health care innovations will be indispensable to maintain a cost-effective healthcare system that is configured around what individual patients really need for a better health care outcome.

The Eindhoven MedTech Innovation Center (e/MTIC) mission is to drive value-based healthcare by growing an ecosystem that creates a fast track in research, development and implementation of sustainable innovations in clinical practice by strengthening the institutionalized collaboration between regional partners focusing on research and innovation in pre-defined clinical domains.

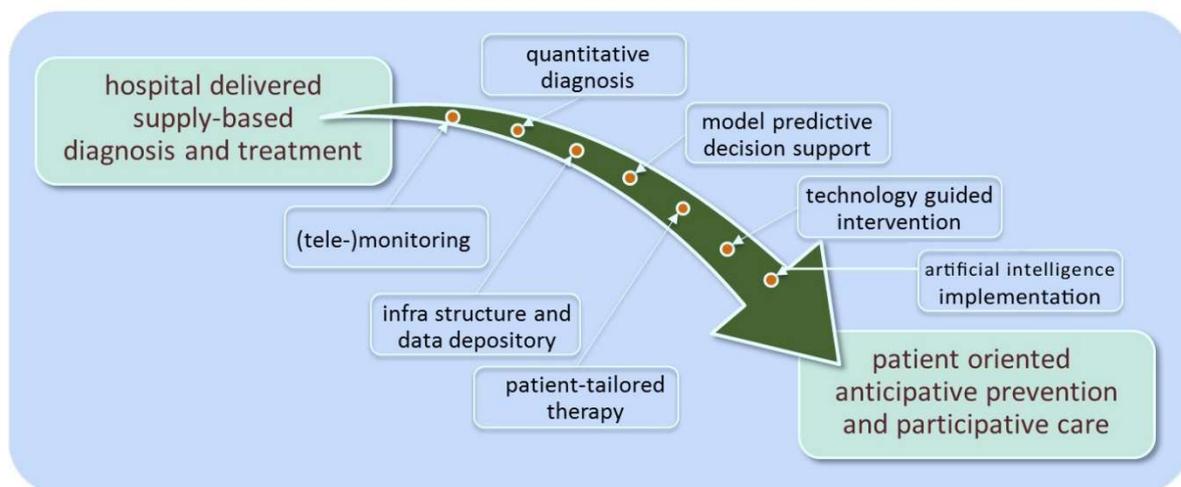


Figure 1: Transition from hospital delivered supply-based diagnosis and treatment to patient-oriented anticipative prevention and participative care.

e/MTIC is a large-scale research collaboration between The Catharina Hospital (CH), the Máxima Medical Center (MMC), Kempenhaeghe Epilepsy and Sleep Center (KH), Eindhoven University of Technology (TU/e), and Royal Philips (Philips).

e/MTIC has been officially launched in June 2018. At the end of 2019, e/MTIC's organisation was formalized with three Daily Management Teams (DMTs) that established the roadmaps for the Cardiovascular, Perinatology and Sleep application domains. Additionally, six Process teams (Taskforces) were appointed to support the e/MTIC activities. Both DMTs and Taskforces have put in place organisation charters, working-processes and their KPI's. The e/MTIC community has expanded significantly in the past years and today counts over 150 researchers, staff and other contributors.

e/MTIC has strong commitment of the boards of all partners. The innovation ecosystem attracts many research talents and delivers tangible results for clinical innovation with the support of Dutch funding. e/MTIC positions itself as the partner to bring healthcare innovation ideas to clinical testing..

As such, the anticipated impact of the ecosystem will be of great importance for different partners (see also Figure 2):

Relevance for the clinics:

- innovations for high volume health care;
- first-time-right diagnosis;
- attraction of excellence;
- education and training of medical staff;
- scientific output;
- implementation of value-based health care.

Relevance for industry:

- access to highly innovative ecosystem, yielding IPR and concepts;
- fast track to implementation of innovations (transfers);
- inflow of highly educated new staff;
- new MedTech spin-offs.

Relevance for the university:

- scientific output;
- attraction of talent;
- education of MedTech engineers.

Relevance for society:

- availability of value-based health care and state of the art solutions;
- increased value of the Eindhoven region;
- economic benefit regarding high-tech industry;

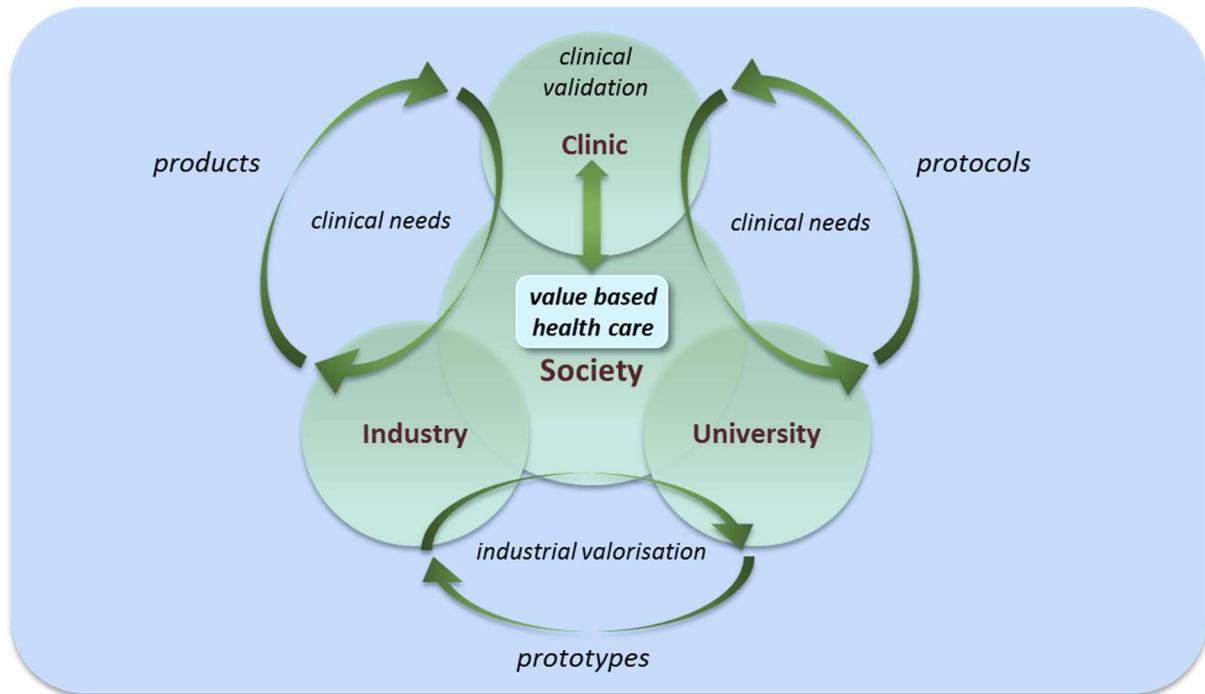


Figure 2: Different partners involved in the MedTech Innovation Centre ecosystem

e/MTIC may also grow by broadening its application areas and defining new partners as full partners, project partners (only involved in specific e/MTIC projects) or associate partners (supporting to achieve mutual goals). In order to preserve the established ecosystem, new partner candidates need to be proposed to the Supervisory Board for careful elaboration and decision on proceedings.

2. Organization structure and governance

Because of the magnitude and breadth of the above ambitions, a broad and balanced multi-level governance structure is being established. A backbone of (around 35) senior bilateral cross-appointments, of key clinical specialists and industrial experts as part-time full professor at TU/e ensures that all partners are continuously well aligned. Additionally, key TU/e and clinical experts have taken up a formal advisory role in industry. Clinical PhD students are teaming up with engineering PhD students, to reinforce each other and each PhD student is employed part-time at the partner institution(s) working under daily supervision.

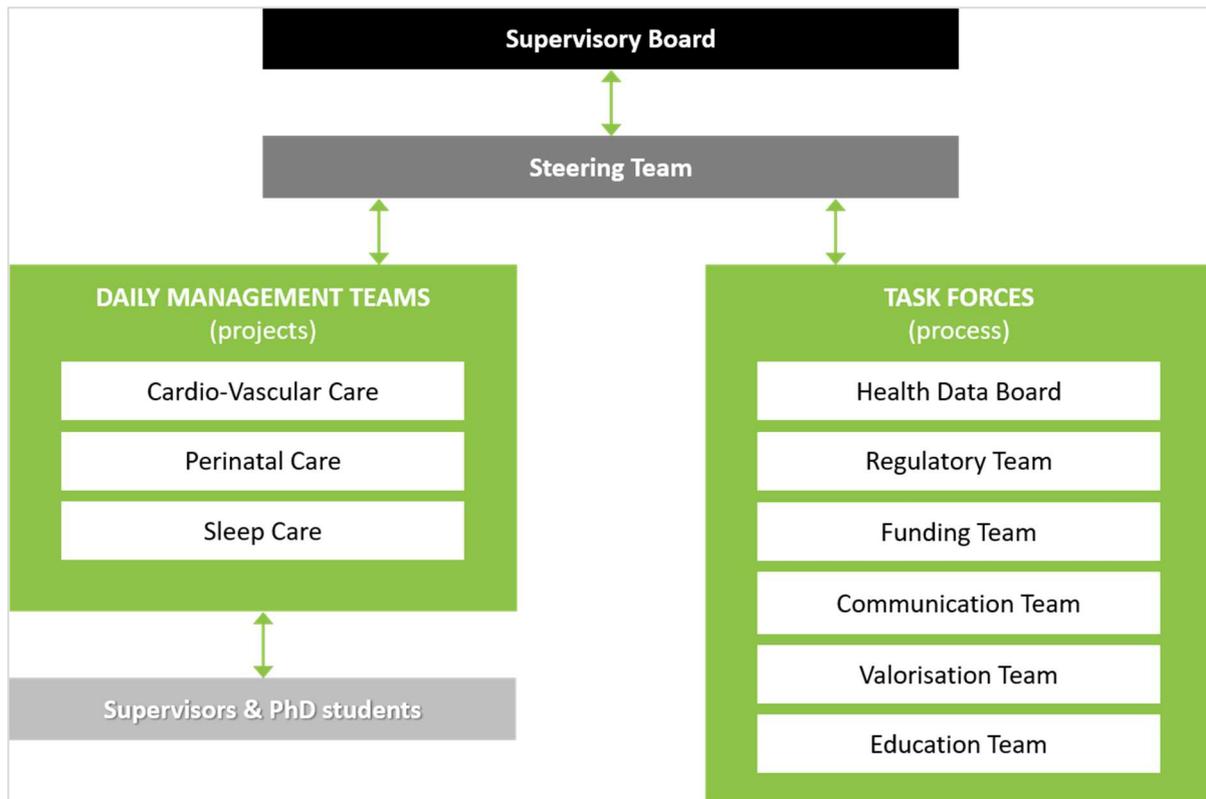


Figure 3: Governance of the Eindhoven MedTech Innovation Centre

To achieve enough critical mass, research is organized in a limited number of coherent programs, currently focusing on cardiovascular care, perinatal care, and sleep & respiratory care. Each program has a Daily Management Team (DMT) responsible for the roadmap and portfolio management, with representatives from each partner (see Figure 3). This team ensures that the program runs smoothly, stays on track, remains aligned with strategic directions, and produces scientific, clinical, and industrial impact. The overall operational and strategic management is handled by a Steering Group composed of (currently about 10) senior managers and researchers from all partners. The full e/MTIC collaboration is overseen by a Supervisory Group at an executive management level which meets twice a year to review progress, resolve strategic issues, and provide strategic guidance.

Dedicated joint task forces proactively support the e/MTIC collaboration in areas of common interest across DMT's such as clinical data acquisition and sharing, education, clinical regulatory matters and acquisition of external funding.

Health Data Platform

To realise the ambition of Fast Track to clinical innovation, there is need of a Health Data Platform (HDP) where large amounts of data from various sources can be safely stored, shared and researched in a reliable and privacy-respecting manner. The Health Data Board has defined the requirements and approach to create a secure infrastructure in which large datasets with medical information (collected from different sources and in different formats) can be analysed, maintained, expanded and shared between the data science platform members in order to be used. This allows for rapid developments of new devices or improves on existing ones and is crucial for the fast track to innovation.

Clinical Regulatory team

The assessment of which type of regulation is mandatory for which study is essential in performing human-related research, as well as creating awareness among researchers of what these regulations entail. Aligning protocols, safety documentation, ethical regulation and patient information is essential to realize fast start of new studies.. This process is pulled by the Clinical Regulatory team.

Funding Team

The e/MTIC Funding Team identifies options for public funds and indicates opportunities with e/MTIC programs. It supports the Daily Management Teams in acquiring funds for the e/MTIC activities and provides an up to date transparent overview of the overall e/MTIC program financial status and outlook.

Communication team

Responsible for creating and expanding the e/MTIC ecosystem, the Communication team establishes alignment of the partner activities and provides the means for the scientific teams to communicate their research results via the e/MTIC channels. Furthermore, they inform the general public, stakeholders and e/MTIC teams about the e/MTIC activities and results.

Valorisation team

To fill the gap in the innovation chain (*see figure 2*), a Valorisation team has been added to the TaskForce teams. Student projects will be part of the valorisation activities, especially for the programs that are also part of the Eindhoven Engine.

Education team

This team provides information about how to design healthcare solutions and facilitate the cross-disciplinary learning for PhDs, PDEngs, and PDs. The Education team creates a link to the other educational activities (e.g. PDEng programs Clinical Informatics and Qualified Medical Engineer, Clinical Physics, Courses for health care professionals and possibly EIT Health)

3. e/MTIC annual program

Each year a new e/MTIC program is added to the portfolio, based on the roadmaps and based on funding by the partners. This allows the e/MTIC consortium to carry out a coherent program within the e/MTIC ecosystem with a succession of yearly defined projects (each having a duration of 4 -5 years).

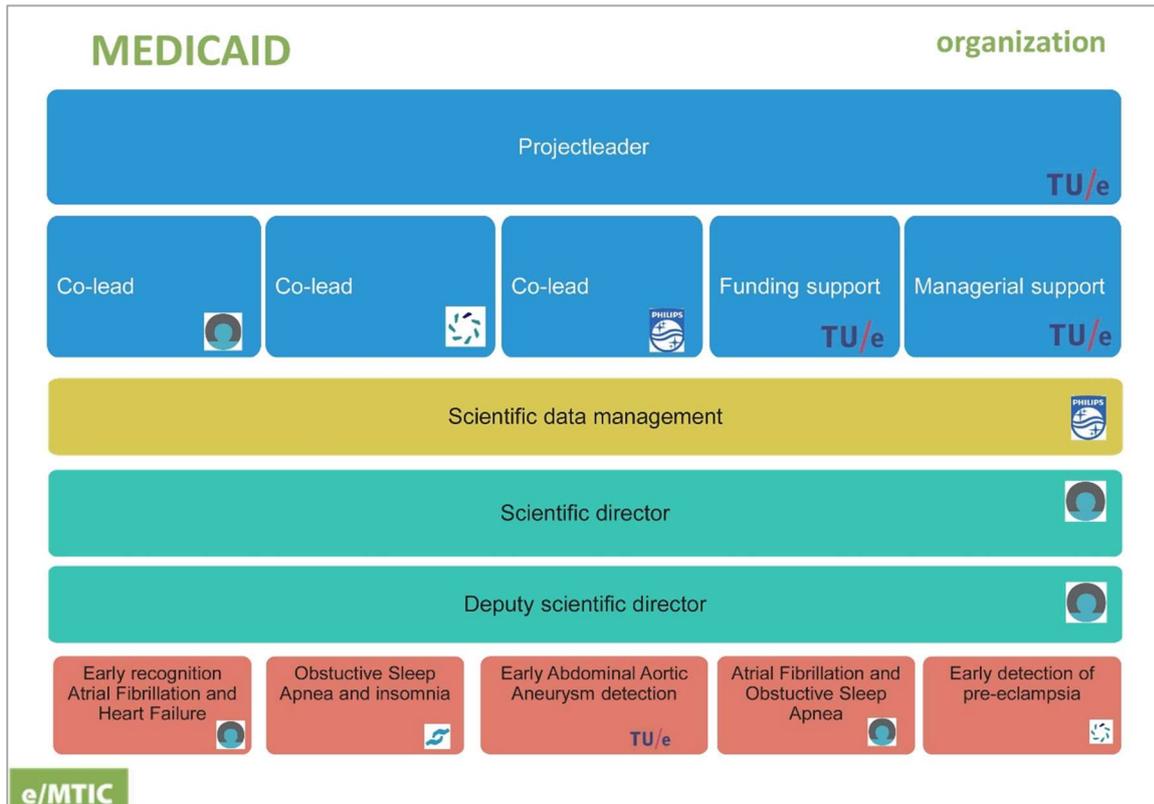


Figure 4: MEDICAID, an example of an e/MTIC programme

e/MTIC projects

One of the main goals of e/MTIC is to make sure that in four years from now for each application domain at least one new product or process is implemented in the clinic and is creating impact for patients, applying Value-Based HealthCare (VBHC).

4. Conclusion

e/MTIC, with its unique ecosystem, has the ambition to become an example in the Netherlands for fast track innovation in the domain of MedTech. Within e/MTIC, projects are continuously reviewed for implementation, monitoring and measuring of 'time-to-market from start to clinical use'.

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