

Thematic Networks of Continuously Functioning In Healthcare Architecture and Engineering in Latin America

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Introduction

The International Federation of Healthcare Engineering (IFHE) is a global non-profit institution whose members are the national associations of healthcare architecture and engineering and aims to promote the safe, efficient, accessible, and environmentally sustainable conception, design and management of buildings and facilities for carrying out health services. In some regions of the world, and with a continental characteristic, there are Regional Groups linked to IFHE, with emphasis on the coverage of Europe and Latin America.

The IFHE Latin America Regional Group is a sectoral representation for the region made up of existing Latin associations in the countries of the American continent linked to the International Federation of Healthcare Engineering (IFHE). However, they are also participants in the Group representatives of countries that are not IFHE members, but they have regular performance and technical and scientific interest with other countries formally linked to the Federation.



Figure 1 – Identification applied in the dissemination of the Continuous Operation Thematic Network. Source: Briseyda Reséndiz, 2021.

The proposal for the implementation of a Continuously Functioning Thematic Network involving Latin American organizations that work with healthcare architecture and engineering was presented by the IFHE Latin America Regional Group during the 26th IFHE Congress held through virtual platforms on January 26, 2021, at City of Rome, Italy. Networks can be understood as organizational arrangements of actions and services with different densities of action, although with a single, integrative, central connection axis. The axes of defined approaches involve themes related to technical aspects of design, management, teaching and research on environments, buildings and technologies related to health care services.

Connection Networks: concepts and proposal

The concept of network serves to define a structure that has a characteristic pattern, one that has a broad representation of use and links with common interests in which an important variety of models can be found in the international literature. The modeling for the construction of a thematic network can be guided by different approaches, but which must consider common objectives to the set of institutions or an institution to which it is linked.

In the international literature, there is a diversity of network models, adopted in different places, to account for distinct situations or conditions, but with a strong emphasis on models and health services. Some references with international use of interest can be registered from the applications in the following cases: networks of care models for chronic health conditions, Psychosocial Care Network; Care Network for People with Physical Disabilities; international network of healthy cities; international network of sustainable cities; UNESCO Creative Cities Network; safe hospital networks, as well as others widely disseminated around the world. The World Health Organization (WHO) also has several networks and we can highlight the ePORTUGUÊSe Network, which is a “platform to support the development of human resources for health in Portuguese-speaking countries, strengthening collaboration in the area of information and training in health” (WHO, 2021) or even the “*Red Panamericana para la Armonización de la Reglamentación Farmacéutica*” which proposes to establish “*minimum harmonized requirements for the Sanitary Registry of Medicines in the Region of the Americas*” (PAHO, 2008).

Other important references can be seen from the following examples: the United Kingdom social and health care model, the New Zealand life course model, the Australian disease prevention and control model, the study model for the sanitation sector in England and Wales creating regionalized networks of cities to be absolved, the health care model in Scotland, the health care strengthening model in several countries around the world, the guided care model and the model PACE (... apud Singh & Ham, 2006).

The proposed experience for the Thematic Network aims to find people representing connected centers as points of a network that create shorter paths between users interested in a particular approach. As well as air traffic network hubs, a model called H & S which: consists of an air network based on one or more central airports (hubs), from which passengers can make connections to their final destinations (spoke). A model that is used in much of the world *“allowing the optimization of the use of the aircraft fleet, providing air service to a larger geographic area and with more possibilities of destinations from a large city”* (FONSECA et GOMES, 2014, p. 226).

For the social sciences, the assessment of networks often refers to the component of interdisciplinarity based on approaches from sociology, social psychology and anthropology, according to Silvia Portugal in a study by the Center for Social Studies of the Faculty of Economics of the University of Coimbra. The author, however, highlights that these limits related to social sciences can be significantly expanded, increasingly reaching other scientific and technical domains (PORTUGAL, 2007, p. 2)

The **Thematic Network of Continuous Operation** of the IFHE Latin America Regional Group is based on these conceptual references and, at the same time, proposes to extend its interest to the exchange of experiences and reflections throughout the Latin American continent. The results obtained will later be shared and disseminated through IFHE's communication channels in a broad and accessible way to everyone.

Objectives

Considering the specific interests of the **Thematic Network of Continuous Functioning** coordinated by IFHE Latin America Regional Group related to architecture and engineering for healthcare buildings, the following main objectives can be highlighted:

- I. Share technical and scientific information, in addition to specific project experiences on each theme and respective Group;
- II. Provide information from and to each national association, to the coordination of the IFHE Latin America Regional Group, as well as to the Superior Council (IFHE Council) and IFHE Executive Committee;
- III. The functioning of each Group will be continuous and each Group coordinator will produce a biannual report on the work carried out to be distributed to national associations.
- IV. Each of the eleven groups that make up the Thematic Network will be able to propose and present new themes and approaches related to its main work axis as a reflection to be integrated with the other Groups.
- V. Interconnection between groups is freely encouraged and should be a promoting purpose of integration into collective knowledge.

Methodology

To define the activities to be elaborated by the Working Groups of the Thematic Network, it was established that each Association will nominate a representative to participate and be the link between the Group's activities and also to their respective country. This, however, should not prevent other participants from the same country from carrying out the activities of that Group.

Thus, the procedures relevant to its implementation are presented below:

- I. Each national association will nominate one member for each Network Group.
- II. Each Group will be composed of one member from each national association, one of whom will be the Coordinator of that same Group, elected by the respective members.
- III. The themes to be used to define the Working Groups were defined in preliminary meetings between the representatives of the countries and are as follows, listed below:

- 1) Events: Congresses and seminars
- 2) Teaching, education and technical information
- 3) Publications
- 4) Research and technical-scientific studies
- 5) Regulations, Standards and Technical Parameters
- 6) Sustainability and Environmental Comfort
- 7) Social responsibility and volunteering
- 8) Ethics and Compliance
- 9) Relationship with the Pan American Health Organization (PAHO/PAHO)
- 10) Integration of healthcare architecture and engineering studies in Latin America
- 11) Relationship of health institutions with urban and regional planning and city levels.

Composition of the Thematic Network Groups

The **Continuous Operation Thematic Network** is formed by representatives of the Latin American architecture and engineering associations linked to the IFHE working in buildings for healthcare assistance. Representatives who are formally appointed by the formal authority of the respective association of each of the member countries indicated in Figure 2.

Red Temática / País	Argentina 0	Brasil 0	Bolivia 2	Chile 1	Colombia 7	Costa Rica 6	Cuba 11	México 0	Paraguay 11	Perú 1	Uruguay 11	Venezuela 2	Reunión Fechas
1 - Congresos y seminarios	Miguel Sartori	Arq. Adriana Samelli	Arq. Jaime Catocora		Arq. Flavio Romero F.			Brenda Iracema Amador Hernández				Ing. Richard Fernández	1 - 2
2 - Docencia y educación ó enseñanza	Ing. Msc. Armando Negrotti	Arq. Eleonora Zioni	Arq. Jaime Catocora	Carlos Richards				Eduardo Frutos Gómez		Glady Hukikawa Migueta		Arq. Rolando Frezza	1 2
3 - Publicaciones	Arq. Liliana Font	Arq. Elza Costeira	Arq. Silvia Siles	Paula Aillon		Arq. William Rodríguez Juárez		Bladimir Boris Tapia		Guillermo Turza Arevalo		Arq. Marco Palladino	1 2
4 - Investigación	Arq. Luciano Monza	Arq. Cristiane Silva	Ing. Civil Vanesa Selaya	Paula Aillon	Arq. Amedeo Vita T.			Susana Miranda Ruiz Edgar Constantino		Guillermo Turza Arevalo		Arq. Sonia Bello	1 2
5 - Normativa	Arq. Graciela Bueno	Arq. Ingo, Antônio Pedro de Carvalho		Ana Maria Barroux	Arq. J. Rodrigo Vélez C.	Arq. Irene Bolaños Álvarez		Juana Rosa Martínez		José Carlos Palmer Martínez		Arq. Lisbeth Hernández	1 2
6 - Sustentabilidad y Confort ambiental	Arq. Alicia Preide	Arq. Doris Vilas Boas	Arq. Jessica Baldivieso Alarcon	Vicky Rojas		Arq. Vanía Urefia Fallas		William Ramírez Pizarro		Miguel Angel Ruiz Bardales			1 2
7 - Responsabilidad social y voluntariado	Arq. Gabriela Perello	Arq. Claudia Miguez	Arq. Daniela Zeballos	Maria de la Luz Barros				Gloria Magaña y Garcilazo		Mario Melzi Cavassa		Arq. Jorge Garrido	1 2
8 - Ética y compliance	Ing. Ricardo Franceschelli	Ing. Cleo Pais de Barros		Felipe Valdes				Arq. Marcia Campos Portillo		Adri Uceda Yarangó		Arq. Armando Salinas S	1 2
9 - Relación con Organización Panamericana de la Salud (OPS/OPAS)	Arq. José Tumiansky	Arq. Emerson Silva	Dra. Corina Cuba Castro (Médico)	Margarita Sepúlveda	Arq. Sergio Gonzales G.	Ing. Marcia Quirós Sanabria		Brieyda Reséndiz Márquez		Enrique García Martínez		Arq. María Abreu	1 2
10 - Integración de estudios de arquitectura e ingeniería para la salud en la América Latina.	Arq. Alberto Marjovsky	Arq. Inara Rodrigues	Ing. Biomedico Rodrigo Salinas	Arq. Heitorberto Hildebrandt		Arq. Randall Bienes Villavicencio		Josefina Rivas Acevedo		Felipe Loyola Avellaneda		Arq. Julieta Quintero	1 2
11 - Relación de instituciones de salud con la planificación urbana a nivel regional y de ciudad	Arq. Esteban Urzuty	Arq. Katia Fugazza	Arq. Ramiro Allez	Arq. Jaime Saez				Eduardo Muñoz Miranda		Clotilde Espinosa Zanabria			1 2

Figure 2 – Countries and themes of the Thematic Network of Continuous Operation with the respective representatives appointed until June 2021. Source: Fábio Bitencourt, 2021.

Until now are participating in the Network the twelve Latin American countries which have been identified institutions with interest and common activities for the purposes of IFHE. These countries were present at the meetings held on January 26, March 12, and April 6, 2021, when the first decisions to implement the Thematic Network were established.

Associations and countries represented:

IFHE – International Federation of Healthcare Engineering		
AADAIH - Asociación Argentina de Arquitectura e Ingeniería Hospitalaria		- Argentina
ABAIH – Asociación Boliviana de Arquitectura e Ingeniería Hospitalaria		- Bolivia
ABDEH - Associação Brasileira para o Desenvolvimento do Edifício Hospitalar		- Brazil
AARQHOS – Asociación Chilena de Arquitectos de Infraestructura Hospitalaria		- Chile
ACAIH – Asociación Colombiana de Arquitectura e Ingeniería Hospitalaria		- Colombia
ACOAIIH – Asociación Costarricense de Arquitectura y Infraestructura Hospitalaria		- Costa Rica
CCAIINH - Comité Cubano de Arquitectura e Ingeniería Hospitalaria		- Cuba
SMAES - Sociedad Mexicana de Arquitectos Especializados en Salud		- México
APAIH - Asociación Paraguaya de Arquitectura e Ingeniería Hospitalaria		- Paraguay
APAES – Asociación Peruana de Arquitectura e Infraestructura em Salud		- Peru
SUAIH – Sociedad Uruguaya de Arquitectura e Ingeniería Hospitalaria		- Uruguay
AVAIMS – Asociación Venezolana de Arquitectura e Ingeniería Médico Sanitaria		- Venezuela

It is important to highlight that currently twenty countries are part of the Latin American continent and, in the current proposal of the Network, those absent are the following: Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama and the Dominican Republic (GREENE, 2018).

All Groups are in the initial phase of work, but with intense content production.

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