

SESSION 3: Case Studies Healthcare Design

**Design
& Health**
International Academy for Design and Health

Milano, Italy 11-14 April 2024

Design & Health

13TH WORLD CONGRESS & EXHIBITION

REVITALIZING HEALTH BY SALUTOGENIC DESIGN

Healthy environment | Healthy people

Designing Community Health Centers to improve wellbeing

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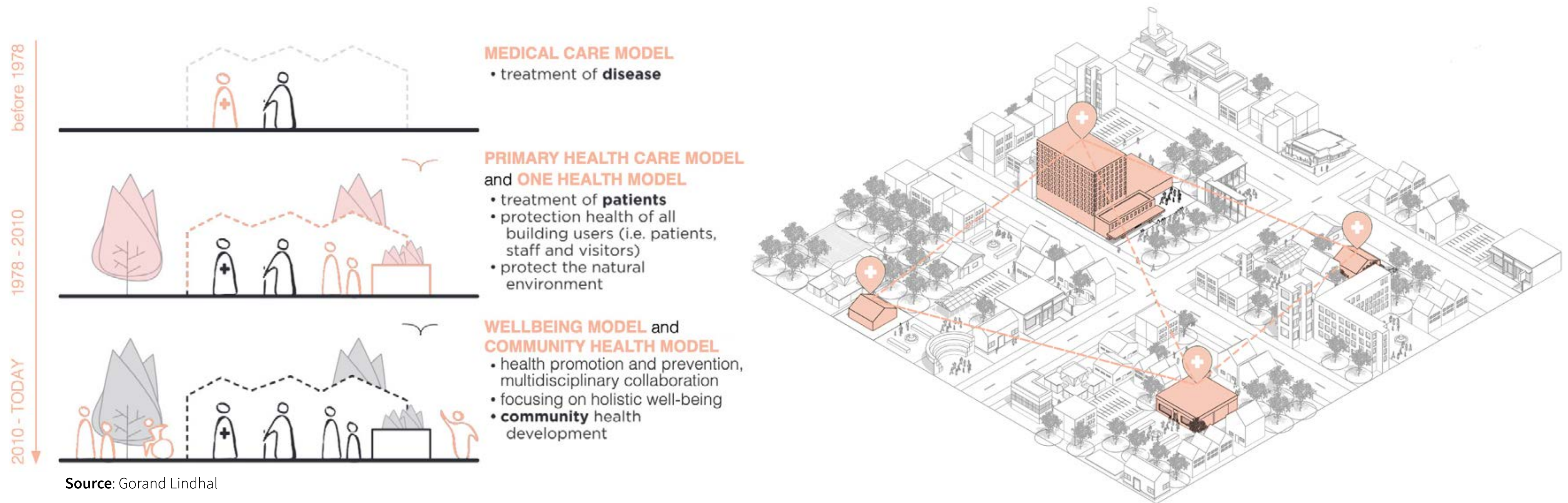
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What is happening?

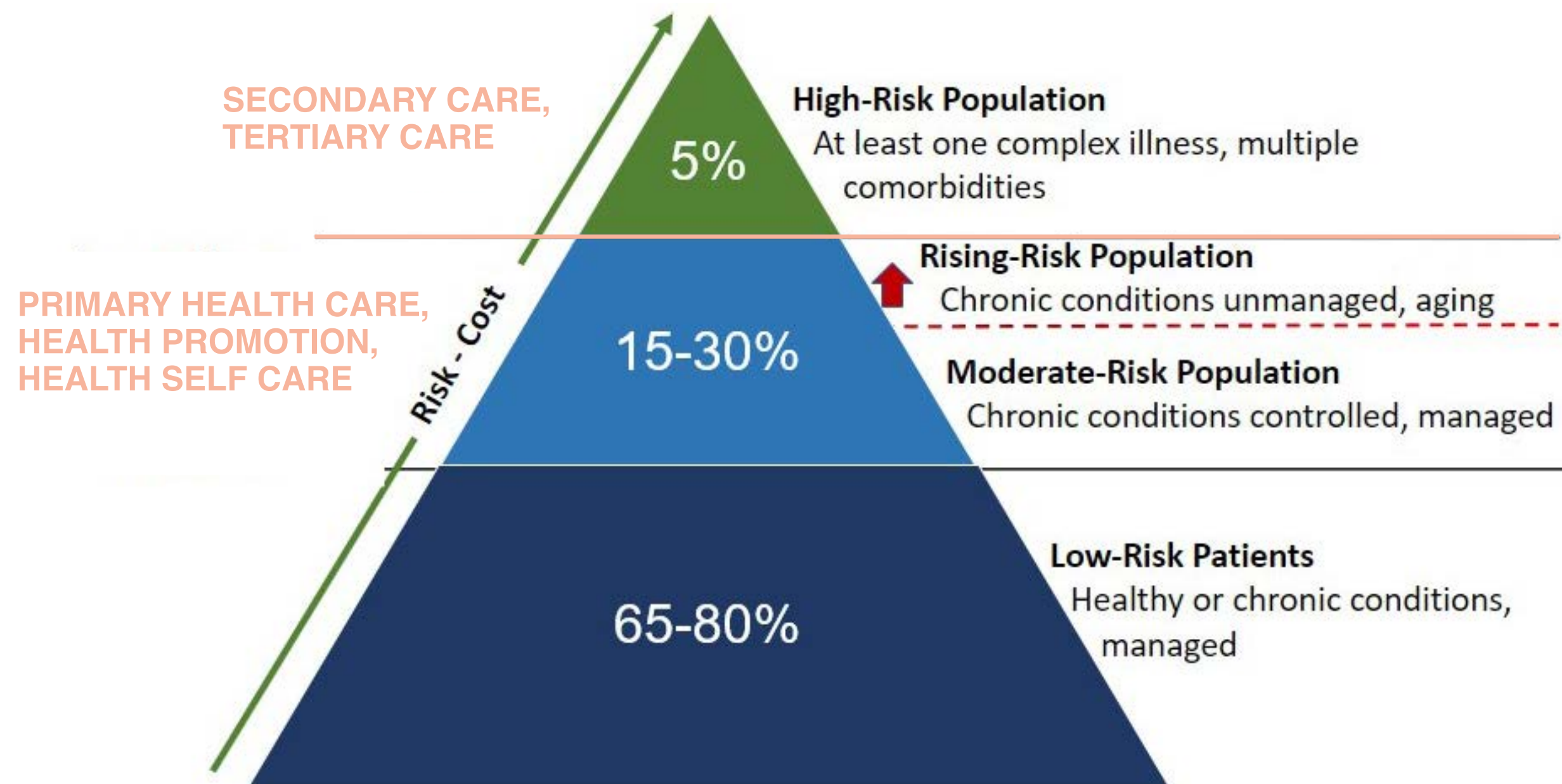
A paradigm shift **from disease to wellbeing orientation**: transitioning from a hospital-centric model that prioritizes disease treatment to a holistic model that extends throughout the district and in line with the One Health approach.



Source: Gorand Lindhal

What is happening?

With a growing number of elderly individuals, there is an increase in age-related chronic diseases (such as diabetes) and a rising demand for **proximity care**. The pandemic accelerated this demand and added the urgent need of an **alternatives to the traditional hospital model**. A lot of country are working to conceive local community-based socio-healthcare facilities.



Source: Bhuyan, K. K. (2004) - Health promotion through self-care and community participation

Expanding their reach

More community health centers, sites served

	NUMBER OF CENTERS	DELIVERY SITES	PATIENTS SERVED
2005	952	5,703	14.1 million
2010	1,124	6,949	19.5 million
2016	1,367	10,400	26 million

Source: Germane Solutions, National Association of Community Health Centers

What is happening in Italy?

Since 2006, Italy has slowly initiated the adoption of widespread territorial healthcare model, the “**Case della Salute**”, unsuccessfully due to low recognition, insufficient personalization of healthcare services, and unclear role as community health reference points. After COVID-19, the Italian National Recovery and Resilience Plan aims to establish **1288 Community Health Centers** (Case della Comunità) by 2026.



Italiadomani
PIANO NAZIONALE DI RIPRESA E RESILIENZA

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MISSIONE 6: SALUTE

OBIETTIVI GENERALI:

M6C1 - RETI DI PROSSIMITÀ, STRUTTURE E TELEMEDICINA PER L'ASSISTENZA SANITARIA TERRITORIALE

- Potenziare il SSN, allineando i servizi ai bisogni delle comunità e dei pazienti, anche alla luce delle criticità emerse durante l'emergenza pandemica.
- Rafforzare le strutture e i servizi sanitari di prossimità e i servizi domiciliari
- Sviluppare la telemedicina e a superare la frammentazione e la mancanza di omogeneità dei servizi sanitari offerti sul territorio.
- Sviluppare soluzioni di telemedicina avanzate a sostegno dell'assistenza domiciliare

The Italian Ministerial Decree 77/2022 defined Casa della Comunità as “*physical, proximity, and easily identifiable* places where individuals can access health, socio-health, and social assistance systems”



What is the issue?

Despite their fundamental role in promoting holistic well-being, many CHCs (especially in Europe) are currently designed as outpatient centers **lacking** services and strategies for the integration of **social and community services and aspects** thus compromising their effectiveness. Our analysis of services offered by 10 “*Casa della Comunità*” in Milan revealed a total of 6 social and community services, with only 2 of these services offered in nearly all Milanese CHCs: the PUA service and the choice and revocation of GPs.

No.	Services	CHC'S in Milan										TOT	%
		P.zza Bande Nere 3 - Milano	Piazzale Accursio 7, Milano	Via A. Doria 52, Via G. Ricordi 1,	Via Don Orione 2	Via Farini 9, Milano	Via Rugabella 4/6, Milano	Via Gola 22 - Milano	Via Masaniello n. 23 - Milano	Via Monreale n. 13 - Milano	Via Stromboli n. 19 - Milano		
SOCIO-HEALTH													
1	HOME CARE	1	0	1	1	1	0	1	1	0	1	7	70%
2	FRAGILITY	1	0	1	1	1	0	1	1	0	1	7	70%
3	FAMILY AND COMMUNITY NURSES	1	1	1	1	1	1	1	1	1	1	10	100%
4	SPECIALIZED NURSING SERVICES	0	1	1	1	1	1	1	1	0	1	8	80%
5	INTEGRATION WITH SOCIAL SERVICES FOR CHRONICITY	0	1	1	1	1	1	0	0	0	0	5	50%
6	FRAILTY SERVICE AND DOMICILIARY	0	1	0	0	0	1	0	0	0	0	2	20%
7	MENTAL HEALTH SERVICES	0	1	1	0	0	0	0	0	0	0	2	20%
8	UVM (Multidisciplinary Evaluation Unit)	1	0	0	0	0	0	1	1	0	1	4	40%
9	SPEECH THERAPY SERVICE	0	0	0	0	0	0	0	0	1	0	1	10%
10	INTEGRATED FAMILY COUNSELING	0	0	0	0	0	0	0	1	1	0	2	20%
Total of Socio-Health Services		4	5	6	5	5	4	5	6	3	5		
SOCIAL													
1	CHOICE AND REVOCATION	1	1	1	1	1	1	1	1	1	1	10	100%
2	SINGLE POINT OF ACCESS - PUA	0	1	1	1	1	1	1	1	1	1	9	90%
3	CONSULTANT	0	1	1	0	0	0	0	0	0	0	2	20%
Total of Social Services		1	3	3	2	2	2	2	2	2	2		
COMMUNITY SERVICES													
1	PUBLIC RELATIONS OFFICE - URP	0	1	1	1	1	1	0	0	0	0	5	50%
2	SCREENING PROGRAMS	0	0	1	0	0	1	0	0	0	0	2	20%
3	TERRITORIAL OPERATIONS CENTER - COT	0	0	0	0	0	0	0	0	0	1	1	10%
Total of Community Services		0	1	2	1	1	2	0	0	0	1		



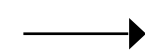
Data Source: Analysis conducted by consulting the “Carte dei Servizi” of 10 “Case della Comunità” in Milan

What is the issue?

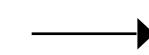
The **shortage of expertise** among those who design and manage Community Health Centers, such as Project Managers, Architects, Designers, Local Health Agencies, and Departments of Public Health and Private Companies, constitutes one of the **main obstacles** to effective change. Of utmost significance, they **lack comprehensive design strategies** that support their work in designing, managing, and incorporating social and community aspects in these facilities.



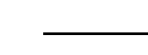
Shortcomings in the design and management of **social and community aspects**



Without designing these aspects, it is **jeopardized their role** as cornerstone institutions for promoting holistic well-being



Without designing these aspects, the overall **effectiveness** of these multi-service hybrid facilities is **compromised**



They will **not** become **community wellbeing** reference centers

What was the aim?

Identify CHCs design
strategies focused
on community's
holistic wellbeing
emerging from
current scientific
knowledge

- **disciplinary area**
Strategies in architectural and design disciplines
- **research cut**
Concentrating on Community Healthcare Facilities
- **research object**
Improving the overall well-being of the community
- **research boundary**
Scientific Literature

Which is the method?

A **systematic literature review** across scientific databases (Scopus, PubMed, Google Scholar) for a comprehensive exploration of studies focusing on social and community design was undertaken. The main question that guide the research was *“How is the built environment of Community Health Centers designed to establish them as a local reference point for community wellbeing?”* and sub-qs *“How are social and community aspects designed/integrated within CHCs?”*

AND

Search within
Article title, Abstract, Keywords

Search documents
 (“**Community Health Center**” OR “Community Health Clinic” OR “Community Health Facility” OR “Primary Healthcare Center” OR “Primary Care Center” OR “Neighborhood Health Center*” OR “Health Center” OR “healthcare facilities”)

AND

Search within
Article title, Abstract, Keywords

Search documents
 (“**Architecture**” OR “Facility Design” OR “Interior Design” OR “Environment Design” OR “Built Environment” OR “physical design” OR “physical space” OR “spatial factors”)

AND

Search within
Article title, Abstract, Keywords

Search documents
 (“**Wellbeing**” OR “well-being” OR “comprehensive health*” OR “community health” OR “social service*” OR “community service*” OR “health education*” OR “health promotion” OR “community-based” OR “social connection” OR “community participation” OR “sense of belonging” OR “sense of community”)

Filters [Clear all](#)

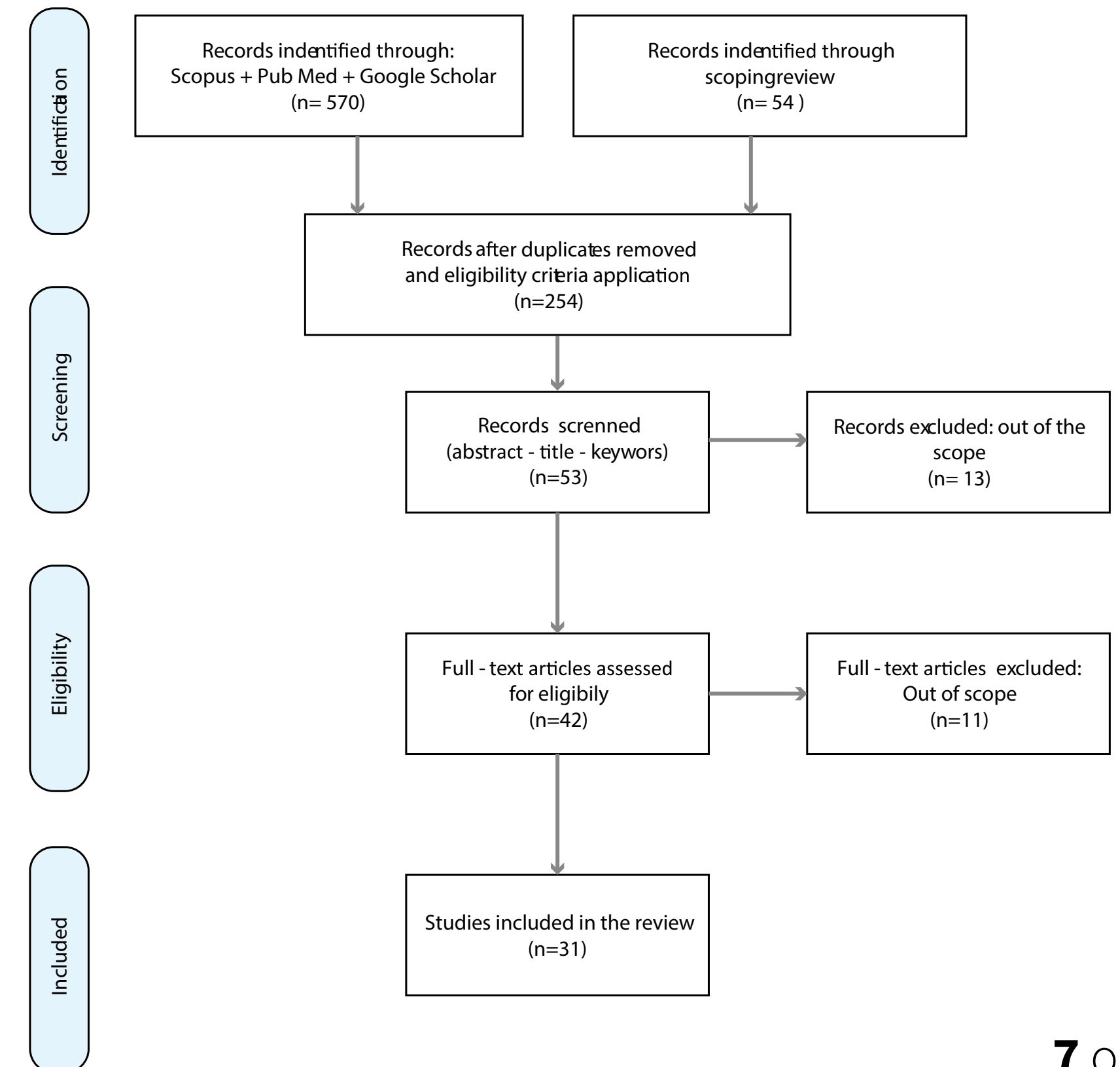
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Language [Clear \(2\)](#)

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Filter by subject area [Exclude](#)

- Mathematics
- Energy
- Biochemistry, Genetics
- Physics and Astronomy
- Immunology and Microbiology
- Pharmacology, Toxicology and f
- Chemistry
- Agricultural and Biological



Which is the method?

All the papers were **collected, classified, and analyzed** in a table. In the first part of the table there are general informations such as Title of the paper, list of the names of authors, year of publication, country of the paper, scientific database where the paper was collected, Journal of the publication, affiliation of the article's authors and related field of study, facility typology analyzed in the paper, and the collected strategies.

	Titles	Authors	Year	Countries	Databases	Journal	Affiliation	Affiliation Area	Facility Typology	Collection of Strategies	Reason for selection	Case Studies
	<i>Title of the paper</i>	<i>Authors who wrote the paper</i>	<i>Year of publication</i>	<i>Country of origin of the paper</i>	<i>In quale database si trova il paper?</i>	<i>In which database is the paper located?</i>	<i>Journal name</i>	<i>Name of University/Research group/other..</i>		<i>The design strategies found within the text of the paper listed by points</i>	<i>Reason why the paper was selected after reading the full text</i>	<i>Any case studies that emerged in the text of the paper expressed as: Name, Country, peculiarity</i>
1	Systematic review of community infrastructure (place and space) to boost social relations and community wellbeing	Bagnall A.M., Southby, K., Jones, R., Pennington, A.,	2023	Regno Unito	Google Scholar	Technical Summary Report	Leeds Beckett University; University of Liverpool	Public Health	Infrastrutture Pubbliche	Miglioramento dell'attrattività ed estetica dei luoghi esterni Valorizzazione patrimonio locale (es. attraverso materiali locali, accesso a storia locale, ecc...) Valorizzazione cultura e identità locale (es. giardino commemorativo persone locali, attivismo ecc...)	Presenti strategie di progettazione	
2	Values Engineering: The Ethics of Design in Community Health Centers	Benjamin Boltin and Nancy Berlinger	2011	USA	PubMed	Hastings Center Journal	The Hasting Center, USA	Architecture & Design	Community Health Center	1. supportare il raggiungimento degli obiettivi etici di queste strutture (come la prevenzione degli errori, un migliore coordinamento delle cure e migliorare l'accesso alle cure primarie) 2. spazi dedicati per l'educazione e la sensibilizzazione = Educazione 3. accogliere servizi, come le cure odontoiatriche, che attirino i pazienti verso un centro e	Strategie progettuali da ricavare / Limitate strategie di progettazione proposte Indicazioni su servizi Specifico su organizzazione	
3	Design strategies and health planning to improve the primary health care environment: a case study in Brazil	Monica Moscatelli	2022	Brasile	Scopus	Journal of Architectural Research	Architecture Department, Prince Sultan University, Riyadh, Saudi Arabia	Architecture & Design	Strutture sanitarie primarie	1. capacità della struttura sanitaria (intesa come dimensione degli spazi e loro adeguatezza) 2. flessibilità della struttura a possibili cambiamenti futuri (flessibilità progettuale, attività multifunzionali nell'area ed espandibilità degli spazi, progettazione modulare) 3. Adattabilità nel design (se si sceglie di fare una CdC rifunzionalizzando l'esistente, occorre	Presenti strategie di progettazione	
4	The essence of neighbourhood community centres (NCCs) in European sustainable neighbourhoods	Primoz Medved	2016	Slovenia	Scopus	URBAN DESIGN International	Ministry of Education, Science and Sport, Ljubljana, Slovenia	Urbanistica	Neighbourhood Health Center	1. multifunzionali e offrono diverse attività, servizi e comodità ai propri residenti, tra cui bar, biblioteche, teatri, cinema, attività per bambini e giovani, attività per anziani, attività all'esterno, corsi didattici, possibilità di affittare spazi, music rooms, cucina, meeting rooms, hall, galas, spazi per associazioni, e molto altro	Presenti strategie di progettazione / Indicazioni su servizi	
5	The power of place: space and time in women's and community health centres in South Australia	Megan Warin, Frances Baum, Elizabeth Kalucy, Charlie Murray,	2000	Australia	Scopus	Social Science & Medicine	Department of Anthropology, University of Adelaide, SA, Australia	Psicologia ambientale	Community Health Center	1. Contesto multidisciplinare: I medici sanitari di comunità lavorano in collaborazione con altri operatori sanitari alleati sotto lo stesso tetto. Questi team multidisciplinari lavorano con la premessa che la salute non riguarda le singole parti del corpo, ma una nozione olistica che viene meglio servita da una gamma di servizi complementari e collaborativi progettati per	Presenti strategie di progettazione / Indicazioni su servizi	
6	A community healthcare clinic in Baltimore: healing environment, design criteria, and assessment metrics	Mohammad Gharpour, Intisar Ameen	2022	USA	Scopus	International Journal of Architectural Research	University of Maryland, College Park, Maryland, USA	Architecture & Design	Community Health Center	1. Wayfinding esterna: chiara segnaletica esterna per aiutarli a individuare l'ingresso della clinica dal parcheggio sul retro e di aggiungere un secondo ingresso con un monitor di sicurezza sul retro dell'edificio per ridurre la distanza di viaggio per i pazienti con mobilità	Presenti strategie di progettazione	
7	The Role of the Architectural Environment in Community Health: An Evidence-Based Initiative	Stephen Verderber and Joseph Kimbrell	2005	USA	Scopus	Journal of Public Health Management and Practice	School of Architecture, Department of Health Systems Management, Tulane University	Architecture & Design	Strutture socio-sanitarie	1. enfasi sull'espressione architettonica di ciascuna sala d'esame come una "casa" distinta 2. CHC configurata attorno a un cortile (facile da navigare per i pazienti, con molte viste verso l'esterno, con collegamento diretto con il suo sito boscoso)	Presenti strategie di progettazione	
8	Physical characteristics of the indoor environment that affect health and wellbeing in healthcare facilities: a review	Salonen, Heidi, Lahtinen, Marjaana,	2013	Australia	Scopus	Intelligent Buildings International,	Queensland University of Technology, Brisbane, Australia	Architecture & Design	Strutture socio-sanitarie	1. sicurezza 2. comfort termico (riscaldamento e climatizzazione) 3. sistemi di ventilazione (meccanica e naturale)	Presenti strategie di progettazione	
9	Community Health Design. Building Power and Places through Participation in Public Interest Design	Matthew Kleinmann	2021	Canada	Scopus	The International Conference - The Constructed Environment	Department of Architecture, University of Kansas,	Architecture & Design	Infrastrutture Comunitarie	1. Community Participation in Design 2. Bisogni comunemente condivisi: scuole, lampioni, marciapiedi, campi da gioco e altri servizi di quartiere che dovrebbero essere raggiungibili a piedi	Presenti strategie di progettazione / Indicazioni su servizi	
10	The Community Health Centers: A Territorial Service in the Post-pandemic City	Marco Mareggi, Michele Ugolini	2022	Italia	Scopus	Springer - New Metropolitan Perspectives. Post COVID-19	Dipartimento di Architettura e Studi Urbani, Politecnico di Milano	Architecture & Design	Community Health Center	1. CHCs struttura che integra l'assistenza sanitaria e sociale, la prevenzione e l'educazione sanitaria, rendendo le persone responsabili e consapevoli di una vita sana e sostenibile 2. si prendono cura delle problematiche ambulatoriali urgenti e non urgenti, delle procedure	Presenti strategie di progettazione	CHC di Baltimora, SPAGNA, 2022, particolarmente rilevante perché ha 4 ingressi separati per 4 utenze differenti (utente acuto, utente anziano, utente bambino, ecc..)
11	The implementation of a Community Health Centre-based primary care model in Italy. The experience of the Case della Salute in the Emilia-Romagna Region	Anna Odone, Elisa Saccani, Valentina	2016	Italia	PubMed	Ann Ist Super Sanità 2016 Vol. 52, No. 1: 70-77	Pubblica, Dipartimento di Scienze Biomediche, Dipartimento di	Public Health	Community Health Center	1. fornire ai cittadini un punto di accesso unico all'assistenza sanitaria 2. garantire l'accesso alle cure 24 ore su 24, 7 giorni su 7 3. organizzare, integrare e coordinare l'assistenza e la comunicazione sanitaria ai pazienti	Strategie progettuali da ricavare / Limitate strategie di progettazione proposte Indicazioni su servizi	Emilia Romagna, Francia, Inghilterra e Belgio hanno indagato molto su CHCs.
12	A New Generation of Territorial Healthcare Infrastructures After COVID-19. The Transition to Community Homes and Community Hospitals into the Framework of the Italian	Brambilla A.; Brusamolín E.; Arruzzoli S.;	2023	Italia	Scopus	Technological Imagination in the Green and Digital	Dipartimento di Architettura, Ingegneria delle	Architecture & Design	Community Health Center	1. services: vaccination center; screening; social healthcare services; telemedicine 2. hall; sanitary facilities both for users and for staff; locker rooms for staff; relaxation room; rehabilitation gym	Strategie progettuali da ricavare / Specifico su requisiti di accreditamento base /	
13	The Community Healthcare center as engine of urban and social regeneration. A post Covid-19 public space design. Health Citadel and Community center in Fiorenzuola d'Arda	Michele Ugolini, Stefania Varvaro	2022	Italia	Google Scholar	Urban Planning, Landscape & Architecture	Dipartimento di Architecture and Urban Studies,	Architecture & Design	Community Health Center	1. vegetazione e infrastrutture verdi e blu 2. sostenibilità ambientale, limitare consumi energetici (es. salvaguardia dell'acqua) 3. mobilità dolce e sostenibile (pedonale, ciclabile, trasporto pubblico e veicoli elettrici)	Strategie progettuali da ricavare / Specifico su definizione di macrotemi e categorie per la	Casa della SALute di Finale Emilia (modena) Casa della SALute di Carpaneto Piacentino (Piacenza) Casa della Salute di Navile (Bologna)

Which is the method?

The design strategies collected were analyzed and clustered in **Domains, Categories and Criteria**. Each strategy is coded with A followed by a the number of the article to always keep track where it comes from. Finally, an analysis was carried out to verify the **frequency** of strategies for each criteria to understand where the scientific community's attention is currently focused and where it is not.

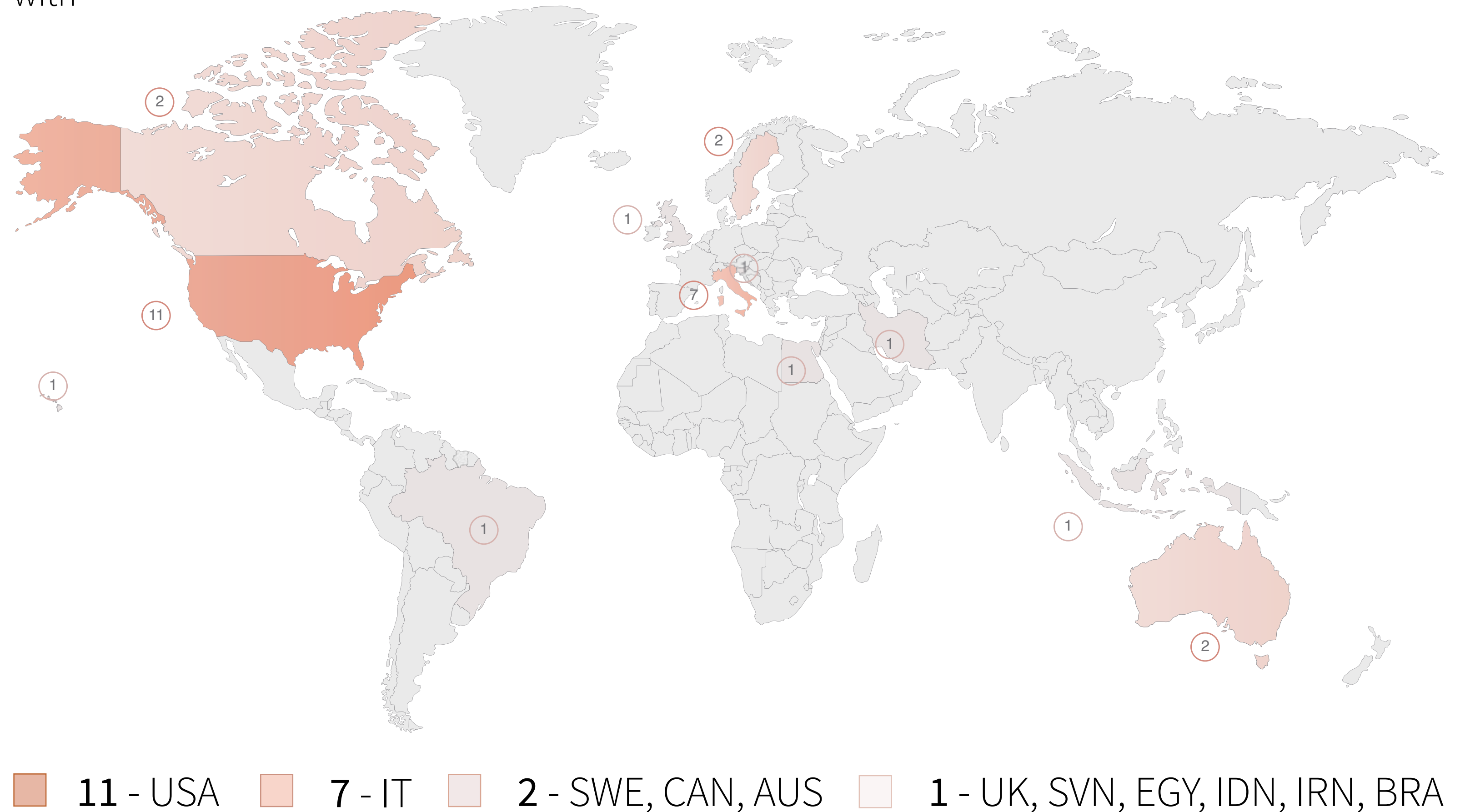
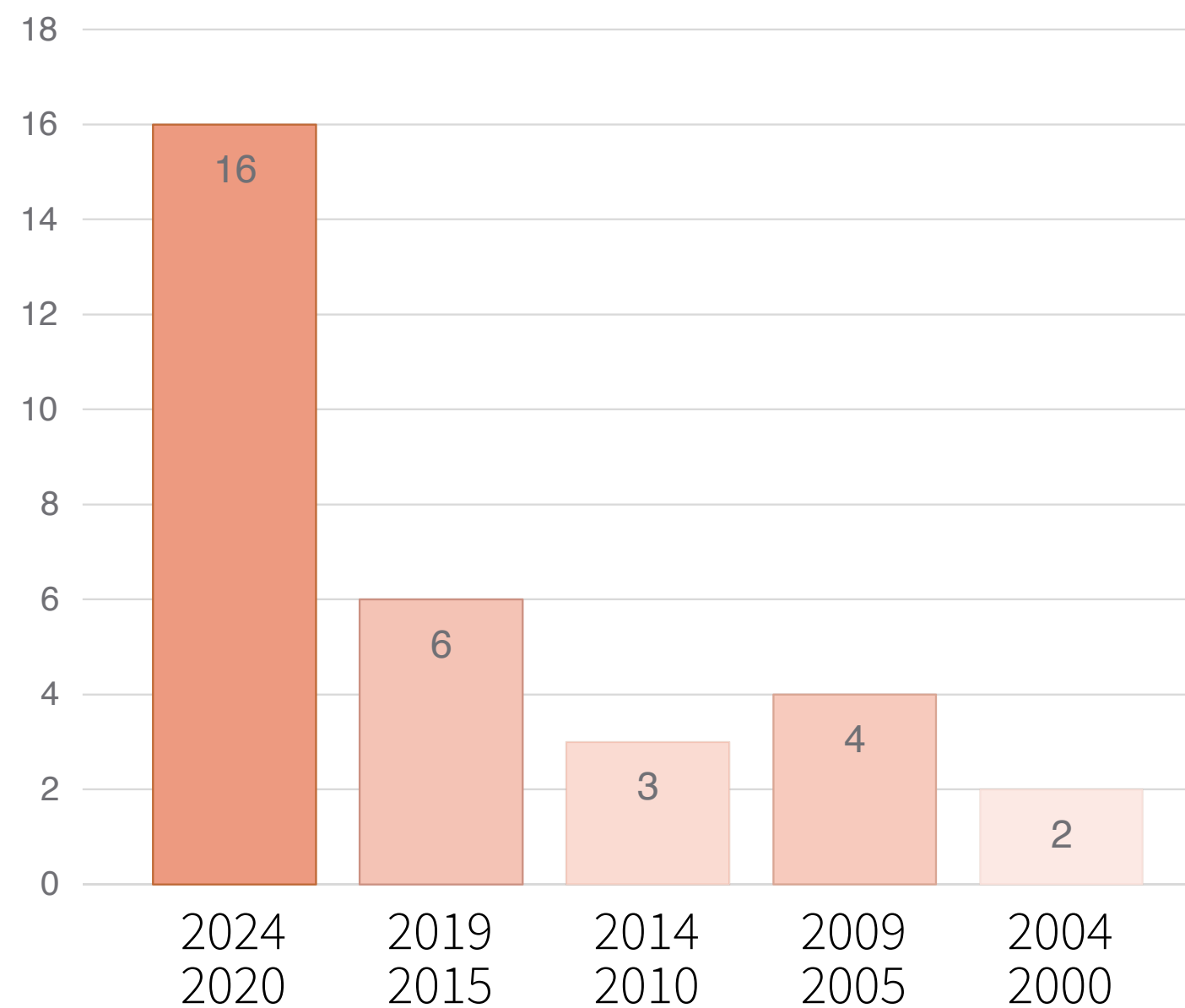
DOMAINS	CATEGORIES	CRITERIA	STRATEGIES	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	Criteria Frequency	Category Frequency
				IDENTITY	IMAGE	ICONICITY (Attractiveness and Recognizability) A1. Miglioramento dell'attrattività ed estetica dei luoghi esterni A1. Fornire landmark della zona A2. Accogliere servizi, come le cure odontoiatriche, che attirino i pazienti verso un centro e forniscano l'accesso ad altri servizi A7. La struttura ambulatoriale di assistenza comunitaria è vista oggi più	1	1	0	0	0	0	1	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0		
CULTURE (Cultural Heritage and Local Identity) A1. Arte pubblica, musei di strada, street art A1. Valorizzazione cultura e patrimonio locale (es. materiali locali, promozione storia locale, giardino commemorativo persone locali, attivismo, ecc..) A2. opere d'arte che rappresentano una popolazione che servono	1	1	0			1	0	1	1	1	1	1	1	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	
COMMUNITY	PARTICIPATION (Participatory Design and Community Management) A1. Progettazione partecipata: Coinvolgimento della comunità nel progetto e gestione (valorizzazione delle priorità locali) A1. Spazi per il volontariato (es. controllo del vicinato, sostegno alle persone fragili, raccolta rifiuti, manutenzione ordinaria del verde e dell'abbellimento, ecc..) A4. Spazi per associazioni (ad es. associazione lavoro giovanile,	1	0		0	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	14	35
	CONTEXT (Localization and Collaboration with the territory) LOCALIZZAZIONE A2. L'ubicazione di un FQHC viene scelta con riferimento ai dati del censimento e ai servizi medici disponibili, in modo che i siti di servizio siano vicini a dove vivono le popolazioni svantaggiate A4. Localizzazione dei centri nel cuore del quartiere	1	1		0	1	1	0	1	1	1	1	1	0	1	1	1	0	0	1	0	0	1	1	1	1	1	0	1	1	0	1	0	1	21	
DISTRIBUTION	FLEXIBILITY (Multifunctionality and Customization)	A1. Spazi flessibili A1. strutture multiuso (Unione di più edifici comunitari in un solo luogo (per diverse età, etnie e convinzioni) A3. flessibilità della struttura a possibili cambiamenti futuri (flessibilità progettuale, attività multifunzionali nell'area ed espandibilità degli spazi,	1		0	1	1	1	1	1	1	0	1	0	0	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	0	1	0	1	16	36
		A1. Sedute, tavoli, ombrelloni per aree di sosta e relax negli ambienti esterni A3. Aree di attesa negli spazi interni di dimensioni adeguate alla capacità della struttura (proporzionata rispetto al numero di attività), presenza di aree di attesa in prossimità degli studi e delle camere mediche (NON	1		0	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	1	1	1	0	1	
LINKAGES	REACHABILITY	ORIENTATION (Wayfinding and Routes) A1. Wayfinding (esterno ed interno alla struttura pubblica) A2. Spazi per bambini evidenziati con segni semplici per esempio decorazione alla parete con le mani dei bambini della comunità A3. Unità funzionali riconoscibili (segnaletica e cartelli che indicano l'attività al suo interno)	1	1	1	0	1	1	1	1	1	1	0	0	0	1	0	1	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	17	39	
		ACCESSIBILITY (Usability, Mobility and Inclusion) A1. Attraversamento pedonale e ciclistico A1. Infrastrutture per la mobilità dolce (piste ciclabili) A1. Infrastrutture per la pedonabilità (percorsi pedonali) A1. Marciapiedi allargati (abbastanza per accogliere percorsi ciclo-pedonali, area sosta e verde)	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1	0	1	0	1	0	1	1	0	1	0	1	22		

Where do the papers come from?

16 out of 31 papers were published **from 2020 onwards** and 52% of the 31 selected papers (n=16) are of **Anglo-Saxon origin**. These have approached the topic of local community health and social structures since the 2000s. In the European context, interest in this topic has grown mainly from 2015 onwards, except for the paper with Swedish origin which is dated 2006.

NOTE THAT

- **Before 2006** only Australia, Canada, and USA investigate this topic
- **In 2016** there was a peak of interest in the topic in Europe, especially in Italy

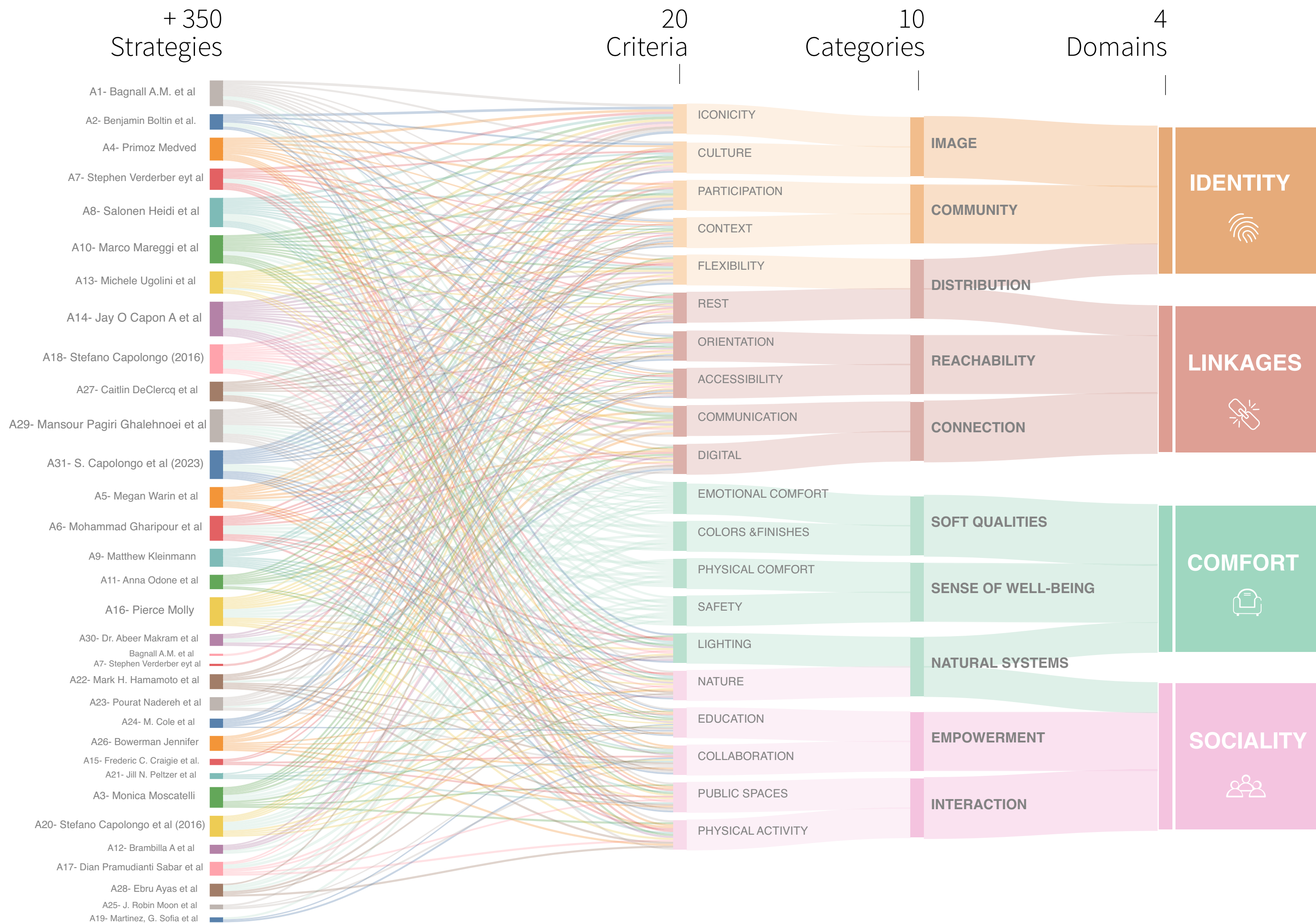


What are the main fields?

During the analysis of the 31 papers selected for the systematic scientific literature review, a diverse picture emerged regarding the authors' affiliations. The majority of the papers, totaling 19, were authored by individuals in the field of Architecture and Design. Following this, 8 papers were authored by individuals affiliated with Public Health, 2 in Organizational Sociology, 2 in Healthcare Management, 1 in Urban Planning, and 1 in Environmental Psychology. This array of disciplines **reflects the interdisciplinary approach to community health and well-being** within architectural and healthcare contexts.



What was the synthesis process?

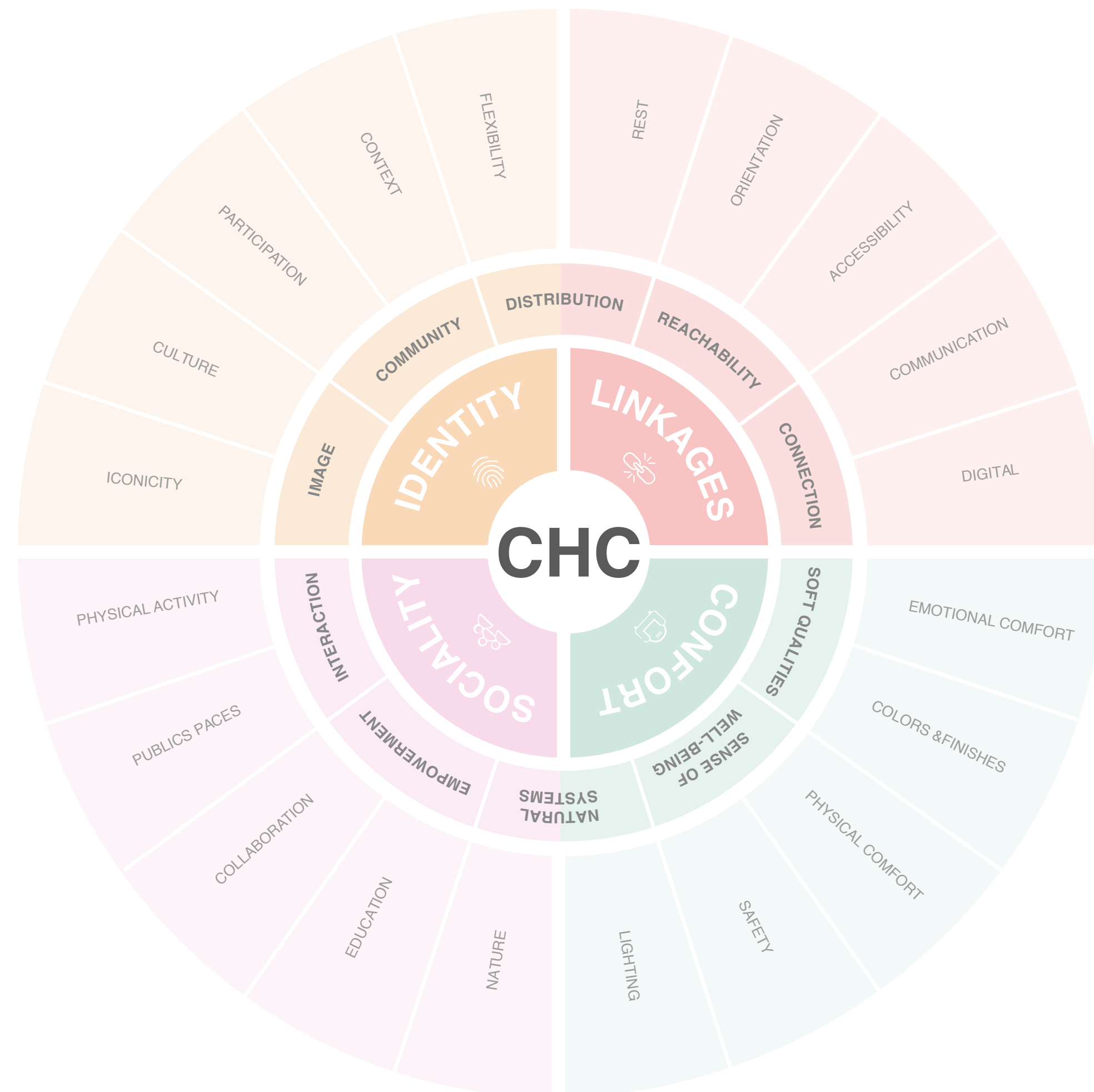


The framework creation entailed thorough examination of each paper, extracting strategies to form **20 Criteria** like “ICONICITÀ” and “EDUCAZIONE”. These criteria were then categorized into **10 Categories**, such as “IMAGE” and “EMPOWERMENT”. Ultimately, they were grouped into **4 Domains**: “IDENTITÀ”, “COLLEGAMENTO”, “COMFORT”, and “SOCIALITÀ”.

This meticulous process ensures a holistic approach to community health center design, addressing aspects ranging from cultural heritage to patient empowerment, fostering environments conducive to well-being and community cohesion.

What is the resulting framework?

Community Wellbeing CHCs framework

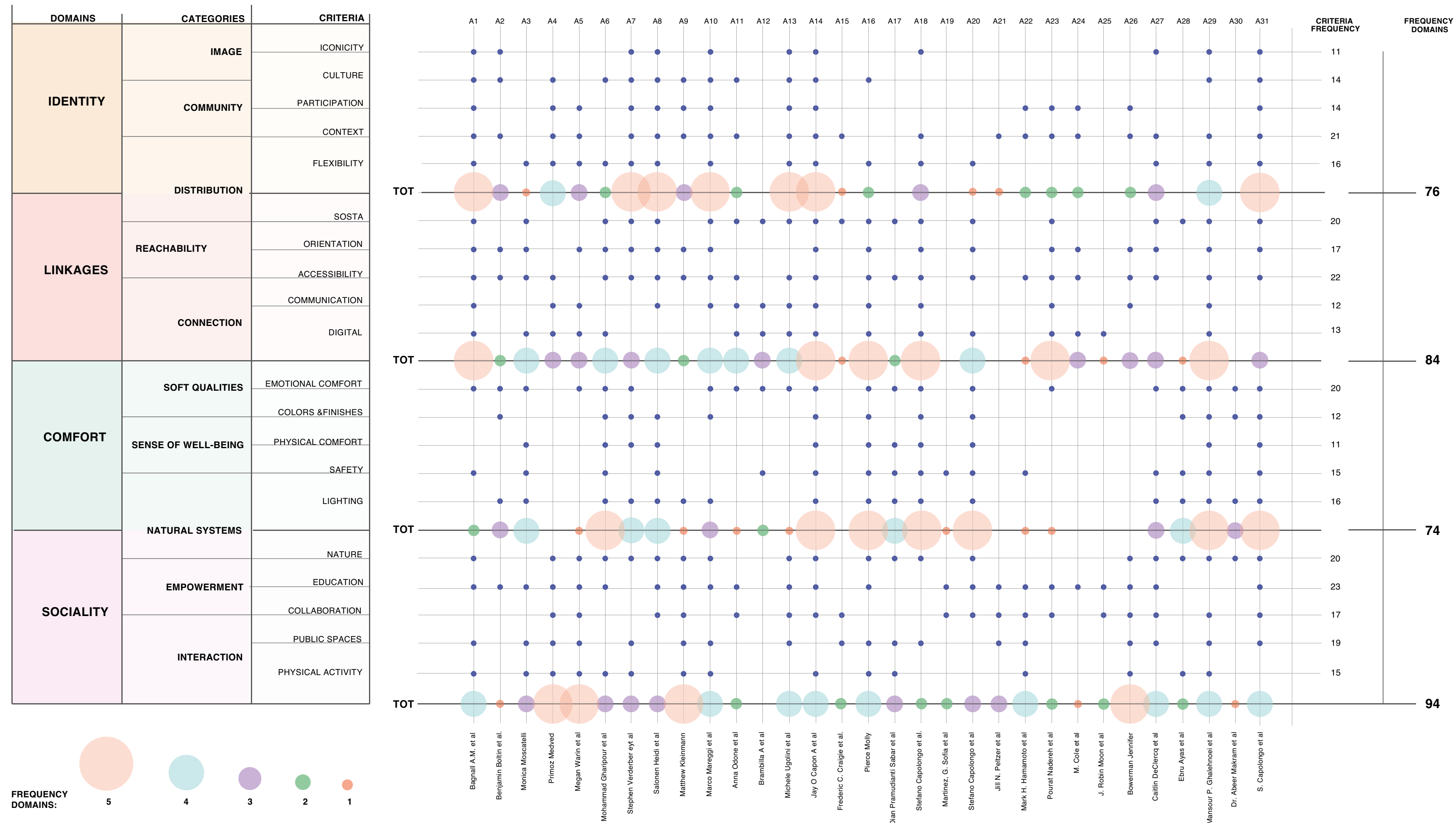


- 4 domains
- 10 categories
- 20 criteria

The framework comprises four domains, ten categories, and twenty criteria, encompassing all the strategies identified in the selected papers.

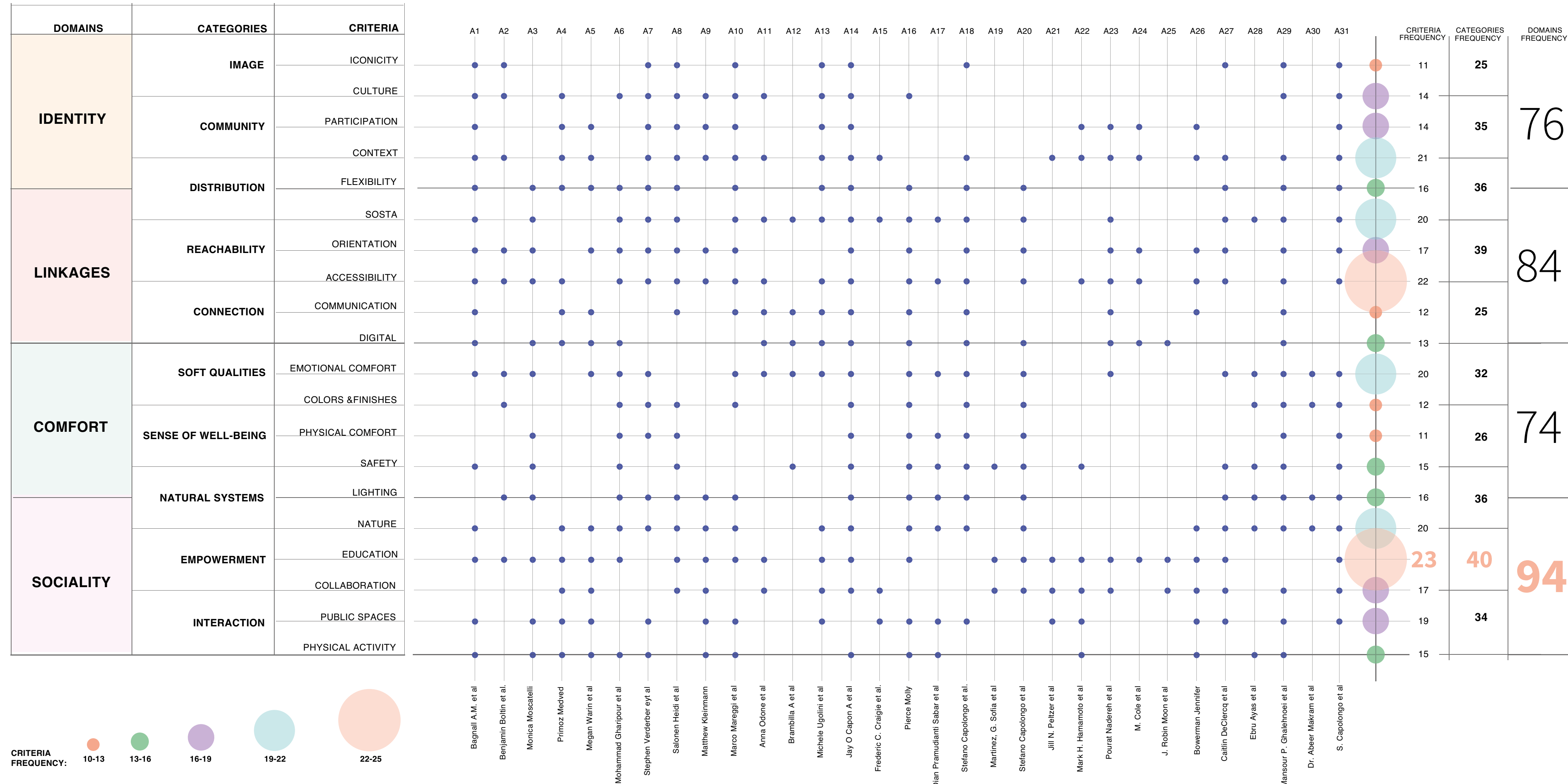
The framework summarizes the design strategies proposed to date by scientific literature to create Community Health Centers that meet both healthcare and socio-healthcare needs, as well as the social and community needs of the population, serving as **catalysts for community wellbeing**.

What are the domains' frequencies?



The graph depicts an analysis of **strategy representation frequency**. Each mention of a strategy in a paper under a criterion is marked as present (blue dot) or absent. This process, applied to all 31 papers, provides specific insight about the current interests in the topic of social and community aspects design. For example, the graphic on the side illustrates the success of one domain over another for each paper. For instance, Paper A1 primarily proposed strategies for “Identity” and “Linkages,” with fewer strategies for “Comfort” and “Sociality.”

What are the overall frequencies?



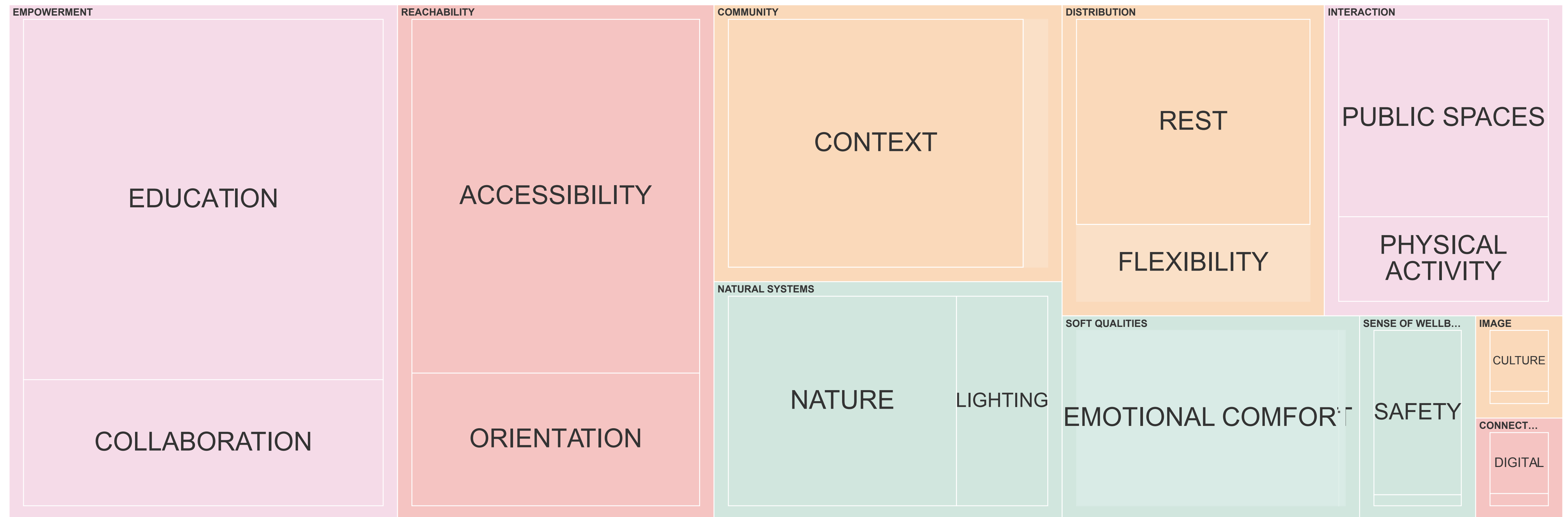
74% of the papers proposed at least one design strategy related to the **“Education”** criteria.

The **“Empowerment”** category and **“Sociality”** domain emerge as most successful, underscoring the importance of designing for **social cohesion**.



What are the overall frequencies?

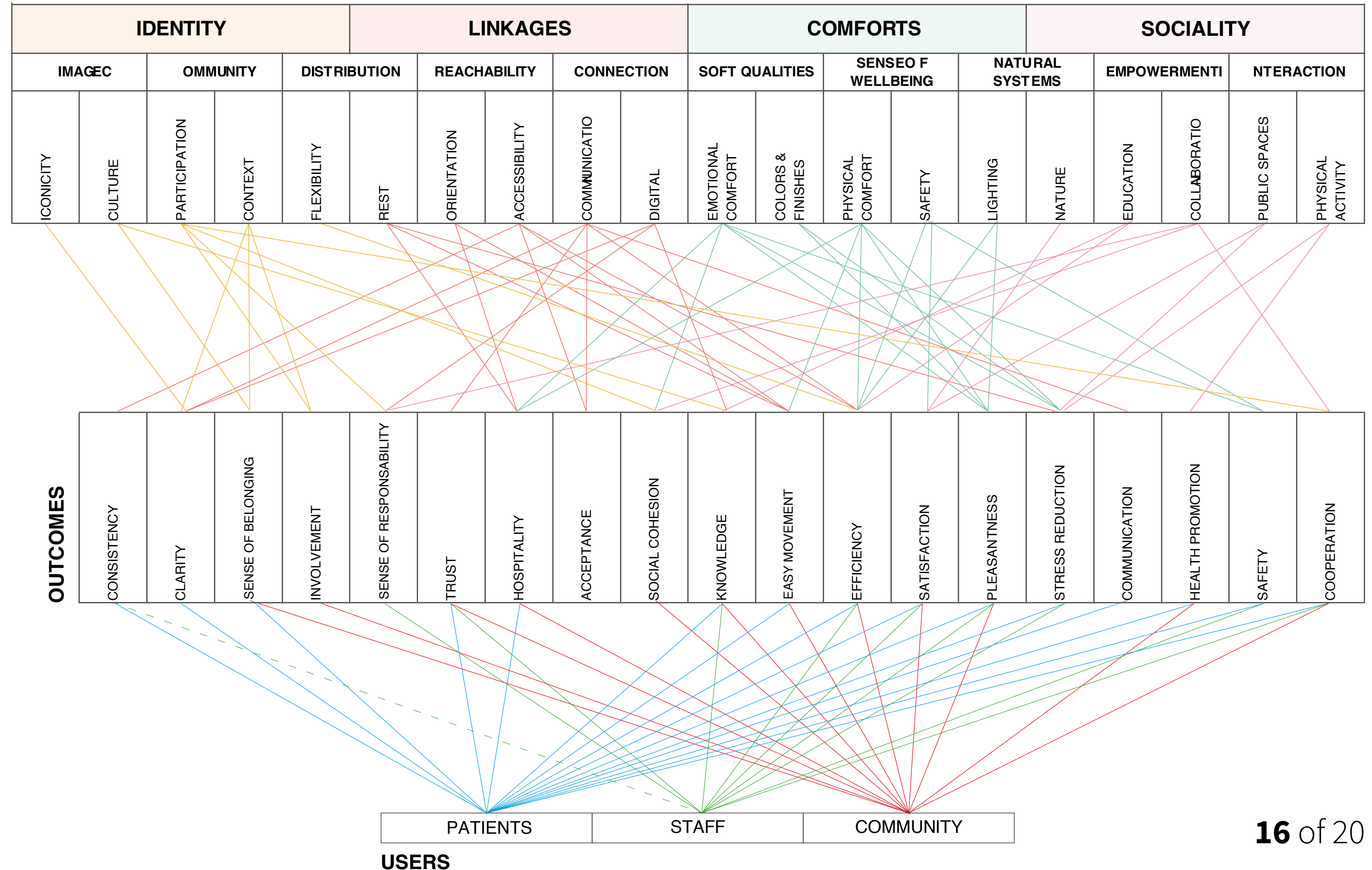
74% of the papers proposed at least one design strategy related to the "Education" criteria. The "Empowerment" category and "Sociality" domain emerge as most successful, underscoring the importance of designing for social cohesion.



What are the outcomes?

The built environment variables from the 20 design strategy criteria are intricately linked to various outcomes like CONSISTENCY and HOSPITALITY. Notably, outcomes like **EFFICIENCY** and **STRESS REDUCTION** are mainly associated with the design strategies proposed by the 31 papers, benefiting multiple stakeholders, including patients, staff, and the community.

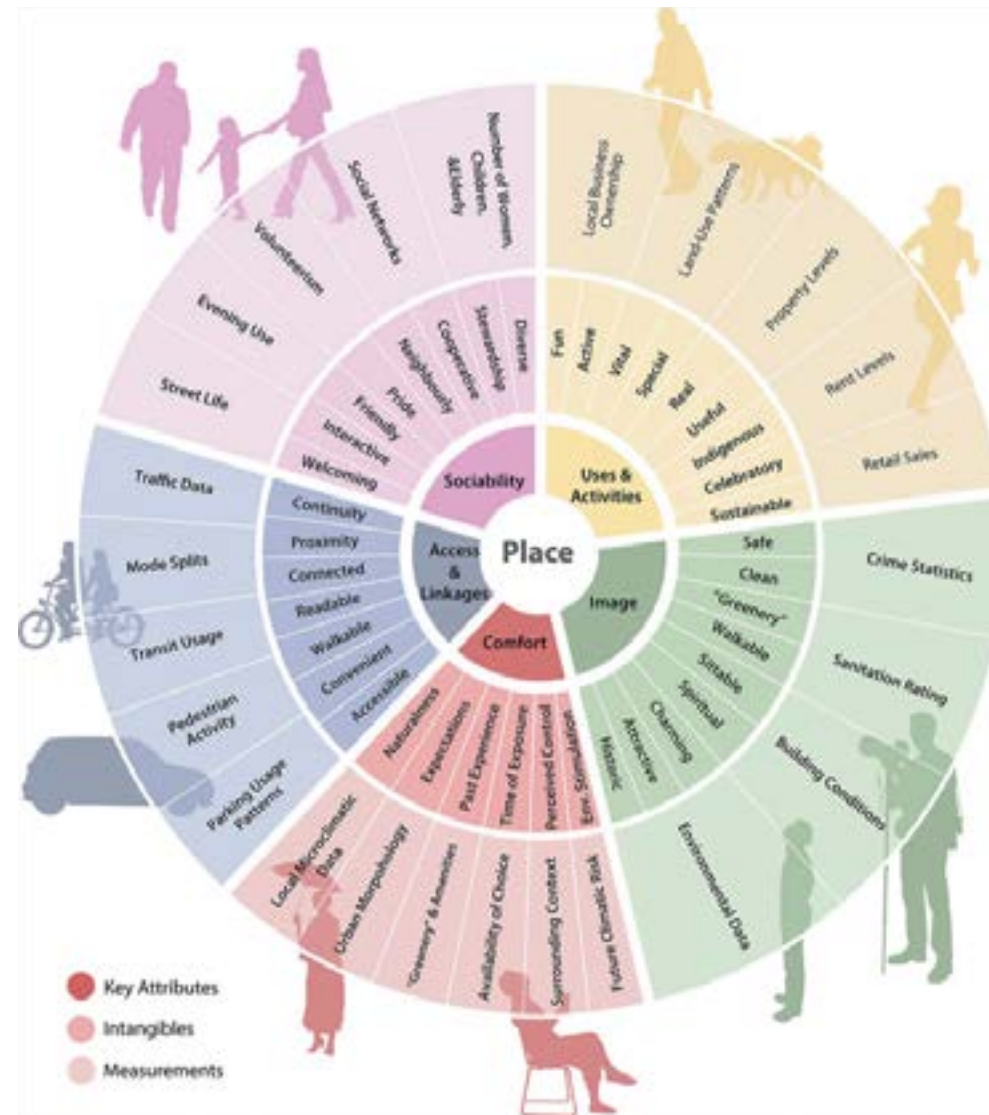
This underscores how designing the social and community aspects of Community Health Centers not only enhances overall well-being but also **improves efficiency and effectiveness** of the facility itself, benefiting both users and operations.



What are the other theoretical frameworks?

PLACEMAKING

Politecnico di Milano - DASTU
Laboratorio di Simulazione Urbana, Fausto Curti - Mahmoud, I.H. (2022)



Placemaking aims to transform cities by focusing on places, engaging the community in the creation of public spaces that maximize shared value. The framework aims to **create accessible, comfortable, attractive, and social places** that support fair economies, **promote health**, provide **comfort**, encourage **social interaction**, contribute to a **cohesive community** and define **community identity**. Creating effective places requires attention to 11 principles, including engaging the community, creating places instead of designs, seeking collaborations, and experimenting with cost-effective and swift solutions.

COMMUNITY-CENTRED DESIGN

Conference Board of Canada + DIALOG Studio
Canada's Leading Independent Research Organization + Architectural, Engineering, Interior design, Planning Firm



The Framework proposes a **holistic approach to design for community well-being** and serves as a tool for architects, urban planners, and designers. It integrates literature research findings, case studies, and expert consultations, resulting in 5 domains, 18 indicators, and 48 metrics. It guides professionals in **assessing the impact of the built environment on the social, cultural, environmental, economic, and political aspects of community life**. The flexible methodology adapts to various projects and evolving definitions of community well-being. It emphasizes the interconnectedness between physical and natural environments and well-being. It promotes a tailored approach for each place and community in line with project priorities and uniqueness.

OBIETTIVI STRATEGICI CDC

AGENAS + Politecnico di Milano - DABC
Non-economic public body of national importance + Design&Health Lab., Professor Stefano Capolongo



The research explores new dynamics influenced by CHCs, emphasizing the importance of interdisciplinary synergies. Design focuses on post-pandemic challenges, integrates complex needs, and promotes urban regeneration. **CHCs become social attractors, contributing to the creation of new sustainable urban centers that are cohesive and environmentally friendly**. Programming aligns with health, social inclusion, sustainability, and safety goals, reflecting national and international standards such as the SDGs and the European Green Deal. The aim is to build resilient and harmonious cities within the context of the new post-pandemic normalcy.

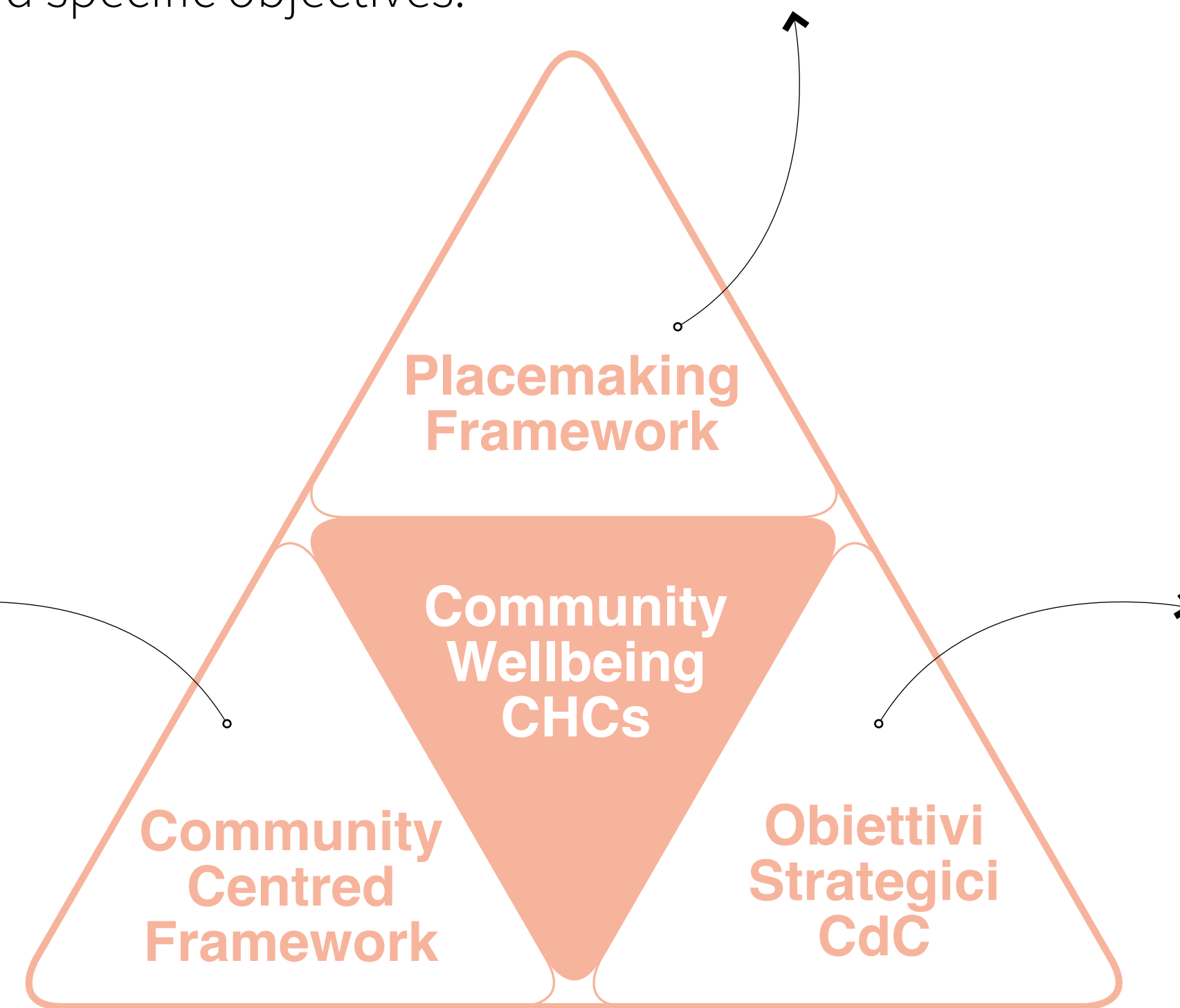
What do they have in common?

PLACEMAKING FRAMEWORK

Both prioritize public space as a means to foster a sense of belonging. They differ in their organizational structure, focus, and specific objectives.

COMMUNITY-CENTRED FRAMEWORK

They place community well-being at the center and employ a holistic approach to design. They differ in the breadth of their applications, offering flexibility and specific details respectively for example economy category.



OBIETTIVI STRATEGICI CDC

The interdisciplinary approach unites them, along with the focus on CHCs. They share the same goals and horizons. They differ in their organizational structure and specific objectives.

What are the future developments?

The analysis of existing design strategies and frameworks serves as a starting point for **formulating design indications** to enhance the key role of CHCs as hybrid, multiservice, and central institutions in promoting holistic well-being, health promotion, improving patient experience, and participation in predictive medicine services.

Social Benefits

COMMUNITY WELLBEING

1. Improved **access** to healthcare services, including **prevention** and health **promotion**
2. Enhanced community **cohesion**, strengthened **sense of belonging**, and more **sustainable** urban development

CHCs Benefits

EFFECTIVENESS OF CHCs

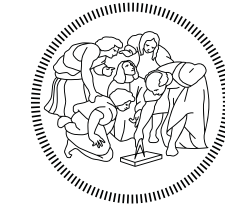
1. Enhanced **effectiveness** in service delivery and **patient flow**
2. Consolidated central role within the community, increased **appeal** to healthcare professionals, and optimized resource management

Scientific Benefits

KNOWLEDGE CONTRIBUTION

1. Contributes to academic and scientific understanding of **healthcare facility design**.
2. **Practical implications** for professionals in healthcare design, architecture, and policymaking

Erica Brusamolin, Maddalena Buffoli
(Milan, Italy)



POLITECNICO
MILANO 1863

DIPARTIMENTO DI ARCHITETTURA,
INGEGNERIA DELLE COSTRUZIONI
E AMBIENTE COSTRUITO

Community Health Centers for community wellbeing

Designing community health centers for comprehensive wellbeing: a systematic literature review

