



OVERALL REGIONAL SITUATION IN HUNGARY IN HOME CARE RESEARCH & INNOVATION AND QUADRUPLE- HELIX COOPERATION IN R&I

REGIONAL STUDY OF THE HOCARE PROJECT IN HUNGARY



European Union
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ABSTRACT (HU)

A „Regionális áttekintés az otthonápolás területén folyó Kutatás-fejlesztés és Innováció, továbbá a quadruple-helix modellen alapuló Kutatás-fejlesztés és Innovációról” című jelentés a magyarországi helyzetről kíván információt nyújtani a HoCare projekt (Interreg Europe, PGI01388, <http://www.interregeurope.eu/hocare/>) számára releváns tevékenységekről és a projekt két célcsoportjáról: a Nemzetgazdasági Minisztérium (NGM), (mint a Gazdaságfejlesztési és Innovációs Operatív Program (GINOP) végrehajtásáért felelős Irányító Hatóság, és a quadruple-helix modellen alapuló otthonápolási innovációs hálózatok valamennyi helixének szereplőiről (mint a GINOP keretéből, vagy egyéb pályázati forrásokból finanszírozott új innovatív projektek lehetséges pályázóiról és közreműködőiről). A jelentésben szereplő információkat a szerző dokumentumok feldolgozásával, interjúk készítésével és fenti célcsoportokkal folytatott szakmai megbeszélések során gyűjtötte, akik így egyben a helyzetjelentés alanyai és célcsoportjai is.

A HoCare projekt célja, hogy a quadruple-helix modellen alapuló regionális innovációs hálózatokat megerősítse, és ez által elérhető innovatív otthonápolási megoldásokat ösztönözze. A quadruple-helix egy olyan innovációs együttműködési modell, illetve innovációs környezet, amelyben a tudásnégyszög valamennyi résztvevője (felhasználók, üzleti szféra, kutatók és egyetemek, valamint a közsféra) együttműködik az innováció létrehozása érdekében.

A HoCare projekt célja, hogy (1) javítsa a GINOP-ot stratégiai szinten (a GINOP irányítási és stratégiai fókuszának javításával) továbbá (2) gyakorlati szinten (azáltal, hogy elősegíti, hogy az innovációra fordítható támogatásokra több és jobb minőségű projekttel pályázzanak az innovációban érintettek).

A (K+F+I) folyamatok hatékonyabb támogatását lehetővé tevő, Nemzeti Intelligens Szakosodási Stratégia – S3 első ágazati fejlesztési prioritása az egészségipar fejlesztése. A horizontális prioritások egyike az innovációs együttműködés erősítése, többek között az innovatív tudás alapú kiválóságot megcélzó nemzetközi együttműködések. Az S3 stratégia céljai (beleértve az Egészséges társadalom és jólét prioritást) az SA programokon keresztül valósulnak meg, elsősorban a GINOP PT1, PT2 and PT8.

Jelenleg Magyarországon számos szakpolitikai eszköz áll rendelkezésre, amelyek felhasználhatóak otthonápolási innovációk finanszírozására. Elsősorban és legfőképpen a GINOP támogatja az otthonápolási innovációkat a 2. prioritási tengely pályázati kiírásain keresztül (kutatás, technológiai fejlesztés és innováció). A prioritási tengelyen belül mind a három beavatkozási alprogram (2.1. Vállalati/üzleti K+F+I tevékenységek; 2.2. Tudástranszfer; 2.3. Kutatás infrastruktúra) alkalmazhatóak úgy az otthonápolás, mind a quadruple-helix alapú kezdeményezésekre. A GINOP további prioritásainak pályázatai és/vagy más OP-k és szakmapolitikai eszközök további támogatási lehetőségeket nyújtanak a quadruple-helix együttműködésben és/vagy az otthonápolás területén lehetséges innovációk iránt érdeklődő/érdekelt szereplőknek.

A teljes GINOP PT2. valamennyi pályázata releváns általában az otthonápolásra, mivel a projekteknek direkt, vagy legalább indirekt módon hozzá kell járulniuk a Nemzeti Intelligens Szakosodási Stratégia – S3 ágazati prioritásaihoz pl. Egészséges társadalom és jólét/ Befogadó és fenntartható társadalom, egy vagy több olyan intelligens technológiát kell megcélolniuk, amelyeket az S3 részletesen meghatároz. Sajnálatos módon, kifejezetten az otthonápolás terén megvalósuló innovációk elősegítését támogató pályázat még nem került kiírásra, annak ellenére, hogy erős nyomás nehezedik az ápolási szolgáltatások integrálására, annak érdekében, hogy átrendeződés történjen a kórházi ápolástól az otthonápolás irányába. Jelentős igény lenne olyan termékekre és szolgáltatásokra, amelyek az időseket és a speciális szükségletekkel élőket segítik, aktív és független életvitelük megtartásában.

A GINOP PT2. mindhárom beavatkozási területének alprogramjai vonatkoztathatóak a quadruple-helix alapú együttműködésre, mindazonáltal ezt a típusú együttműködési modellt direkten még nem támogatják, mintegy igen fontos feltételként említik meg csupán, bátorítva a szereplőket a modellel járó előnyök kihasználására,

illetve a quadruple-helix együttműködésben történő részvétel az értékelési szempontoknál előnyt jelent a nyertes pályázatok kiválasztásakor.

Az innováció területén számos olyan hálózat és rendezvény létezik már Magyarországon, amelyek alkalmasak a quadruple-helix modell típusú együttműködésre és hálózatépítésre az otthonápolási szegmensben. Létezik egy, az innovációban domináns szereplőkből álló, de meglehetősen kis hálózat, melynek tagjai korábbi közös kezdeményezések mentén (OP-k) már együttműködtek. Jellemzően ők a kutatói szektor képviselői és az üzleti szektort támogató szervezetek közül kerülnek ki. A klaszter és quadruple-helix programok a 2007-13. közötti finanszírozási időszakban felsőoktatási intézmények és/vagy vállalatoknak számára biztosítottak pályázati támogatásokat, hogy akkreditált innovációs klasztereket hozzanak létre, vagy erősítsék a quadruple-helix modellben történő együttműködéseiket.

Amióta Magyarország számára is rendelkezésre állnak a Strukturális Alapok, számos projekt, program és kezdeményezés került megvalósításra. Ezek között számos olyan akadt, amely általában a quadruple-helix modell típusú együttműködések kezdeményezését, létrehozását és fejlesztését célozta meg; például: Science Park (Tudás-Park) a Hódmezővásárhely-Szeged kiemelt növekedési zónában; „Science Park” Debrecenben; „Egészséges Élet - Innovációs környezet és szakmai hálózat fejlesztése”(Eger); Komplex Innováció - Egészségipari hálózat a hatékonyság növelése (Debrecen); Szabályozott vállalkozó egyetem (Pécs); Virtuális Egészségközpont, 'META' és 'MENTA' projektek, az Állami Egészségügyi Ellátó Központ (ÁEEK) megvalósításában.

A Horizont 2020 uniós keret finanszírozásában két új projektet találunk a „Teaming” elnevezésű kutatási kiválósági programban (HCEMM-MOLMEDEX - a magyar Molekuláris Medicina Kiválósági Központ létrehozása), melynek célja a translációs medicina, az alapkutatási laboratóriumi kutatási eredmények klinikai alkalmazásának elősegítése és „lefordítása” annak érdekében, hogy a lehető legrövidebb idő alatt bevezetésre kerüljenek a hétköznapi orvosi ellátásban. Az EPIC projekt – (Termelésinformatikai és Termelésirányítási Kiválósági Központ) létrehozásának a célja, hogy kiemelkedő eredmények születhessenek a kibernetikai termelési rendszerek területén. A Kiválósági Központ által a KMR régió képviselheti magát az EIT Health InnoStars programokban, amelynek különleges koncepciója az egészségügyi innováció és a nemzetközi együttműködés kezdeményezése, erősítése Európa szerte, valamint jelentős számú új innovatív termék és szolgáltatás piacra vitele. 2015 óta, az EIT Health innovációs hálózathoz csatlakozás nyomán, számos új, az innovációt segítő partneri együttműködés alakult ki, melyek folyamatosan bővülnek.

Számos olyan projektet és kezdeményezést találunk, amelyek a quadruple-helix modell alapú együttműködések kialakítását és fejlesztését célozzák meg az otthonápolási szegmensben. Ilyen pl.: az „Included Telemedicina Fejlesztő Központ” (SZTE Szeged); a MEREK által megvalósított "Guruló" projekt (amelynek célja egy olyan országos segéd- és sporteszköz-fejlesztő műhelyhálózat létrehozása, amely egyéni szükségleteket és igényeket szolgál ki az önálló életvitelt segítő technológiák alkalmazásával); illetve a „Virtuális Ellátó Központ”, a „META” és a „MENTA” projekteknek is vannak olyan elemei, amelyek kifejezetten az otthonápolásra alkalmazhatóak. Egyéb kezdeményezések a Magyar Máltai Szeretetszolgálat és Lovagrend (MMSz) eredményeit veszik alapul. Az MMSz innovatív megoldásként fejlesztette ki WEBNOVER.HU honlapját, hogy támogassa az informális segítőket (idős, vagy beteg embertársukat otthon ápolók szükségleteire válaszként, könnyen elérhető, az ápolást bemutató egyszerű képzési-, audió-vizuális tananyagokat, videókat kínálnak). Az MMSz indította el a Skype Care I. és II. programokat (Skype az Idősgondozásban). Az intervenciók kutatás azt a hipotézist vizsgálta meg, hogy a tartós gondozásban részesülő, internet használatot egyáltalán nem ismerő, idős emberek életminősége javul-e, ha elsajátítják skype használatát és képesek lesznek családtagjaikkal skype-on kommunikálni).

A quadruple-helix együttműködés létjogosultságát az innováció létrehozásában minden érdekelt látja, de a különböző helixeket képviselő érdekelték eltérő tudása, tapasztalata és szükségletei okán, a modellről alkotott véleménye is változó. Az egyik legösszetettebb helixet a „felhasználók” alkotják. Igen különböző

szükségeiknek köszönhetően, mindannyiukat érdeklí a quadruple-helix mint modell, mivel olcsóbb, jobb és biztonságosabb megoldásokat keresnek problémáikra. Az „üzleti helix” innovációs célja, hogy fenntartsa és növelje eladási versenyképességét és piaci profitját. Ezért készek arra, hogy hasznosítsák quadruple-helix modellt, hogy a piaci igényekről, műszaki és technológiai lehetőségekről, az állami követelményekről, támogatásokról és azok feltételeiről pénzügyileg kedvezőbb, jobb és biztonságosabb információkhoz jussanak. A HEI célja, hogy erősítse az egészség ipari és egészségügyi K+F+I tevékenységeket, és elősegítse a szakmai hálózatok fejlesztését, támogassa tudásmenedzsmentet és tudásátadást az egészségügyben azáltal, hogy ösztönzi a triple/quadruple helix modell alapú együttműködések az üzleti vállalkozások, nonprofit, gazdasági szereplők, felsőoktatási, akadémiai testületek és a civil szervezetek (mint végfelhasználók) között. Az állami (köz) szféra szervezetinek nincs tudása és tapasztalata quadruple-helix együttműködési modellről, az innovációs célú (PPI) és kereskedelmi hasznosítást megelőző (PCP) közbeszerzésekről, ezért csak fenntartással és bizonyos feltételek kikötésével hajlandóak ilyen projekteken részt venni.

Szerencsére az operatív programokért felelős szervek (mint speciális tagjai a ‘public’ (köz) helixnek) a felsőoktatási intézmények támogatására és/vagy vállalatok részére hálózatépítésre, projektek elindítására, tudásátadásra és quadruple-helix alapú együttműködések létesítésére kiírt pályázatok elindításával „kitapossák” ezt az utat.

Részletekért kérjük, hogy olvassák el az alábbi jelentést, amely a jelenleg nyilvánosan elérhető információk összegzése alapján készült, egy előzetesen megtervezett kérdőív kivonatos kitöltésével (nem teljes szöveg). A jelentést mindkét magyarországi célcsoport megkapja majd. A jelen jelentésben szereplő információkat (a jó gyakorlatokat bemutató projektleírásokkal és az OP-k tartalmi és stratégiai fókuszára vonatkozó részekkel együtt) felhasználásra kerülnek majd a projektet lezáró közös szakmapolitikai tanulmányban és az átültethető szakmapolitikai ajánlásokat tartalmazó nemzetközi szintű jelentésben, amely elvezetnek az akciók tervek kidolgozásához (az OP-k továbbfejlesztését szolgáló, az otthonápolás területén lehetséges innovációk finanszírozásához) minden résztvevő országban, így Magyarországon is. A jelentésben szereplő információk nem teljes körűek, az elérhető nyilvános információk alapján készültek és szükségszerűen nem tükrözik a szerző véleményét.

ABSTRACT (EN)

This survey on 'Overall regional situation in Home Care R&I and quadruple-helix cooperation in R&I' was compiled with information on the situation in Hungary relevant for the activities of the project HoCare (Interreg Europe, PGI01388, <http://www.interregeurope.eu/hocare/>) and its two target groups – Ministry for National Economy of Hungary (MoNE) (as Managing Authority of the Economic Development and Innovation Operational Programme – EDIOP) and actors of home care innovation ecosystem from all helixes of quadruple-helix model (as potential applicants and participants of new innovative projects submitted to be financed within EDIOP or other policy instruments). The information within this report has been gathered through desk research of the author, and through interviews and discussions with both target groups for whom the situation is also produced and published.

Objective of HoCare project is to boost delivery of home care innovative solutions in regional innovation chains by strengthening of cooperation of actors in regional innovation system using Quadruple-helix approach. Quadruple-helix is an innovation cooperation model or innovation environment in which users, businesses, research actors and public authorities cooperate in order to produce innovations. HoCare aims to (1) improve EDIOP at strategical level (by management or strategic focus improvements of EDIOP) as well as to (2) improve its practical level (by support of submitting more and high quality projects to EDIOP for innovation financing from innovation actors).

The first sector development priority of National RIS3 is fostering health industry. One of its horizontal priorities is strengthening innovation cooperation, inter alia international cooperation targeting innovative knowledge base of excellence. Objectives of the RIS3 (incl. the priority "Healthy society & wellbeing") are implemented through SF programmes, primarily through PA1, PA2 and PA8 of GINOP (EDIOP).

There are several policy instruments that could be exploited to finance home care innovations, currently available in Hungary. First and foremost, EDIOP fosters home care innovations by its calls for proposals in the priority axis 2 (Research, technological development and innovation). Within the priority axis all the three intervention subprogrammes (2.1. Corporate/business RDI activities; 2.2. Knowledge transfer; 2.3. Research infrastructure) fit both home care and quadruple-helix initiatives. Calls available at the rest priorities of EDIOP and/or in other operational programmes and national policy instruments provide additional granting possibilities for actors interested in quadruple-helix cooperation (QHC) and/or innovation in home care.

All calls in the whole priority axis 2 of EDIOP are relevant to home care in general, because projects must directly or at least indirectly contribute to the sectorial priorities of the National S3 (strategy) e.g. Healthy Society and Wellbeing / Inclusive Society, or target one of the smart technologies defined in the National S3. Unfortunately direct calls fostering innovation in home care has been still missing, despite there is a firm pressure for integration of care services based on a shift from hospital care to home care and there is a considerable demand for products and services assisting active and independent life of the elderly and people with special needs.

All the three intervention subprogrammes of priority axis 2 in EDIOP are relevant to QHC, however, this cooperation approach has not been directly subsidized yet, only – of course as a very important condition encouraging actors to utilize the advantages of the model – QHC could be evaluated as a plus during the project selection process.

There are already several networks and events available in the innovation ecosystem in Hungary that could all be used to network and cooperate (and utilize QHC) in the homecare segment ecosystem. There is a rather small network of several strong innovation actors who are already networked and cooperate based on past common initiatives (operational programmes), especially among research actors and business supporting organizations. Cluster and QHC programmes provided grant for higher education institutions (HEIs) and/or enterprises to establish and strengthen an Accredited Innovation Cluster (AIC) or even QHC during the programming period 2007-13.

There have been several projects, programmes and indicatives implemented in Hungary since Structural Funds are available. Some of them have been aiming initiating, establishing and improving QHC in general, e.g.: Science Park in the Hódmezővásárhely-Szeged priority growth zone; Establishment of "science park" in Debrecen; Healthy Living- Developing Innovative Environment and Professional Network (Eger); COMPLEX INNOVATION - Health industry network for efficiency improvement (Debrecen); Regulated entrepreneurial

university (Pécs); and the Virtual Health Centre (VHC), 'META' and 'MENTA' projects implemented by the National Health Service Center (ÁEEK).

There are two new projects approved and subsidized by Horizon 2020 (The project HCEMM-MOLMEDEX - Creating the Hungarian Centre of Excellence for Molecular Medicine aims to establish a centre of excellence in the field of molecular medicine with a strong focus on translational medicine, that is, the "translation" of laboratory research findings to everyday medical treatment as soon as possible. The project EPIC – Centre of Excellence in Production Informatics and Control aims to create a center of excellence with the potential to achieve remarkable results in the fields of cyber-physical production systems.) In addition the Central Hungary Region is represented in InnoStars, which is a unique concept, initiation and cooperation for widening participation and outreach across Europe. It has been establishing new ties for innovation and growth since 2015 by joining EIT Health network.

There are some initiatives and projects aiming initiating, establishing and improving QHC in home care segment as well, e.g.: "Included Telemedicine Center" (Szeged); "Guruló" (rolling) project (implemented by MEREK) aiming to establish a national service that adapts assistive technology to the individual needs of users; and VHC, META and MENTA projects containing elements directly targeting home care too. Further initiatives may be based on the results of the Hungarian Charity Service of the Order of Malta (MMSz) as well. MMSz assumed to find an innovative solution with developing WEBNOVER.HU to support informal helpers (meeting needs for easily available, simple training material, including audio-visual elements regarding simple care tasks). MMSz was also engaged in Skype Care I and II (Skype in Care for Older People) programme designed to test the hypothesis that internet-illiterate old people receiving long-term care at home would cease to feel lonely if they could learn to use Skype.

Quadruple-helix cooperation during innovation production is seen by all actors, but the stakeholders of the different helixes have altering knowledge and experiences and needs concerning the topic (model). One of the most complex helixes is the 'users'. Thanks to different needs all of them is (would be) interested in QHC as they demand to receive more affordable, better and safer solutions to their problems. The purpose of innovation at 'business' helix is to maintain and increase competitiveness of sales and making profit on the market. Therefore they are ready to utilize QHC to gain more affordable, better and safer information about market demand, the technical-technological possibilities and the conditions of public requirements and supports. HEIs aim to strengthen R+D+I activities related to the field of health and healthcare industry and promote the development of professional networks, knowledge management and knowledge transfer in healthcare by fostering triple/quadruple helix cooperation among business enterprises, nonprofit economic actors, higher education, academic bodies and civil organizations (e.g. end-users). Public organizations have no experiences and knowledge about QHC, PPI and PCP, therefore they would join such projects with reservations and conditions.

Fortunately the owners of the operational programmes (as special members of 'public' helix) have been paving the way by calls for proposals to support HEIs and/or enterprises to prepare and run projects for networking, knowledge-transfer and quadruple helix cooperation.

For details, please read through the below report, that was compiled from the available information so far and being presented in the format of a structured filled in questionnaire (not a full text). This report is being shared with both target groups in Hungary. Information within this report (together with good practice cases from projects and management & strategic focus of OP) will be used as inputs to Joint thematic studies and Policy Transfer Reports being created on international level leading to Action Plan development (for OP improvement in favour of home care innovations being financed) in each country, including Hungary. Information within this report are not exhaustive, were compiled based on available information and do not necessarily represent views of the author.

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1. Structural funds programme

Structural funds' – Operational Programme(s) - basic information

<p>Name of the Structural funds' - Operational Programme (OP) - supporting Research & Innovation</p>	<p>Economic Development and Innovation Operational Programme 2014-2020 – EDIOP (GAZDASÁGFEJLESZTÉSI ÉS INNOVÁCIÓS OPERATÍV PROGRAM 2014-2020 – GINOP)</p> <p>https://www.palyazat.gov.hu/az_europai_bizottsag_altal_elfogadott_operativ_programok_2014_20</p>
<p>Geographical coverage of this OP (whole country, specific counties, international, etc.)</p>	<p>NUTS 1 level: The OP mainly covers HU2 and HU3 parts of Hungary, but accordingly the flexibility rules the OP covers all the HU1 part of Hungary (Central Hungary) as well.</p> <p>NUTS 2 level: Considering that an operational programme (as a main rule) shall cover only one type of NUTS 2 categories, this OP mainly targets the less developed regions of Hungary, but applying the relevant flexibility rules, partly addresses Central Hungary too. Therefore, it covers all the 6 less developed regions of Hungary and accordingly the flexibility rules covers the 7th Hungarian region (Central Hungary Region) as well.</p> <p>NUTS 3 level: The OP covers 18 less developed counties of Hungary and accordingly the flexibility rules covers Pest county and Budapest as well.</p> <p>There are calls available under the Competitive Central Hungary Operative Programme (CCHOP) for applicants in developed Central Hungary Region too (Hungarian name: Versenyképes Közép-Magyarország Operatív Program - VEKOP). These are so called "mirror calls". Most of them are open together with the GINOP call they are mirroring.</p>
<p>Managing Authority (Responsible body) for this OP</p>	<p>The Managing Authorities (MA) for EDIOP (GINOP) and CCHOP (VEKOP) are in the Ministry for National Economy of Hungary (MoNE). EDIOP's MA is the Deputy State Secretariat of Economic Development Programmes, while CCHOP's MA is the Deputy State Secretariat of Regional Development Programmes.</p>
<p>Intermediate body(ies) for this OP (if relevant)</p>	<p>As intermediate bodies (IB) in Hungary are managed by the ministries generally responsible for defining the policy, the implementation and the professional content of the operational programmes, the IB of EDIOP and HHCOP are in the MoNE and directly reports the Deputy State Secretary of Economic Development Programmes (who is the head of the MA).</p> <p>The annual or multiannual work plans (and calls) prepared by MoNE and NRD Office are finalised by the MA and approved by the Government. The implementation of the annual or multiannual work plans is executed by the MA and the IB and controlled by the Monitoring Committee.</p> <p>A specific actor - the Hungarian Development Bank - is involved in the implementation of the 8th funding priority axis (of EDIOP) as financial intermediate body for the Financial Instruments.</p>

<p>General objectives of the OP (max. 1000 characters)</p>	<p>EDIOP aims to stimulate the economies of the less developed regions in Hungary. Its most important priorities are the competitiveness of small-and medium sized enterprises, research and innovation, and employment. The programme also aims to develop the tourism industry, enterprises' energy efficiency, and information and communication technologies. Moreover it will stimulate the use of financial instruments to cover other objectives, like increasing renewable energy production and improving the energy efficiency of households and public buildings.</p> <p>The Programme focuses on different main priorities:</p> <ol style="list-style-type: none"> 1. Increasing the competitiveness and productivity of SMEs 2. Research, technological development and innovation 3. Infocommunication developments 4. Energy 5. Employment 6. Competitive labour force 7. Tourism 8. Financial instruments
<p>Name of the relevant thematic priority axis supporting R&I activities (+ in local language in brackets)</p>	<p>Priority axis 2: Research, technological development and innovation (2. prioritási tengely: Kutatás, technológiai fejlesztés és innováció)</p>
<p>Specific objectives of the given priority axis described above (max. 1000 characters)</p>	<ul style="list-style-type: none"> - 1. Corporate/business RDI activities: Supporting R+I activities, investments and cooperation by increasing R+D activity of knowledge and technology intensive enterprises. Principles for project selection - i.a.: market driven development, high-tech micro+SMEs; - 2. Knowledge transfer: Supporting R+D investments (cooperation and networking) by increasing the number of strategic networks of innovative undertakings and (public and nonprofit) research organizations (including support to maintain and follow up Horizon 2020 project results). Principles for project selection - i.a.: projects – as far as possible - shall contribute to the networking and cooperation among enterprises or the sectors of the quadruple helix; - 3. Research infrastructure: Producing R+I capacities for creating and enhancing excellence to foster and enable participation in collaboration and joint initiatives among Member States and EU Commission (Horizon 2020, EIT KICs, ERA-NET, ELI etc.). Principles for project selection - i.a.: RDI infrastructure and management, networking, spin-offs.

Available support programmes / intervention areas in 2014-2020 relevant to Home Care R&I and quadruple-helix cooperation in R&I

A) Corporate/business RDI activities (Vállalati KFI)

<http://nkfih.gov.hu/funding> & <https://www.palyazat.gov.hu/plyzatkeres>

Supported activities	<p>There are 7 calls for proposals available to apply for grants (ESIF+national):</p> <ol style="list-style-type: none"> GINOP-2.1.1-15; VEKOP-2.1.1-15; KFI_16 - Support of business RDI activities (open: 30.09.2015-29.09.2017 - Suspended) GINOP-2.1.2-8.1.4-16 - Business RDI, combined with loan (open: 01.03.2017-01.03.2019) GINOP-2.1.3-15; IPARJOG_15 - Intellectual property rights (open: 24.09.2015-25.09.2017) GINOP-2.1.4-15 - Innovation voucher (open: 21.03.2016-20.03.2018) GINOP-2.1.5-15; ÖKO_16 - Innovation ecosystem (start-up and spin-off) (open: 01.03.2016-01.03.2017 – Already closed!) GINOP-2.1.6-16 - Exportable innovative product development (Open: 01.06.2017-03.06.2019 – Still forthcoming!) GINOP-2.1.7-15; VEKOP-2.1.7-15 - Prototype, product, technology and service development (Open: 15.12.2017-14.12.2017)
Relevancy of this support programme	Relevant to Home Care R&I
Reasons of its relevance for Home Care R&I	<p>All the 7 calls support product / service / technology / process / organization / marketing innovation activities (directly linked to R+D or technology) in general, therefore could be well used also for home care segment. Furthermore projects must directly or at least indirectly contribute to the sectorial priorities of the National S3 (strategy) e.g. Healthy Society and Wellbeing / Inclusive Society, or target one of the smart technologies defined in the National S3.</p> <p>Considering that the support of innovation is focusing on smart technologies, the support of services might not be considered a first priority, but an additional aim linked to fostering production.</p> <p>All the calls support innovation projects focusing real market needs.</p>
Reasons of its relevance for quadruple-helix cooperation in R&I	<p>All the 7 calls target beneficiaries from the business sector, mainly SMEs.</p> <p>These calls do not pay much attention to the cooperation among varying sectors, however, there are some advantages during project selection if the enterprises cooperate with each other.</p> <p>GINOP-2.1.4 (Innovation voucher) is developed for supporting cooperation between business and research/academia. GINOP-2.1.5 (Innovation ecosystem) is designed to foster cooperation among the players of the seeding phase of the innovation ecosystem (mainly business and research/academia). These 2 calls might be improved by laying down further requirements and/or benefits for involving users and public utilizing the quadruple helix approach.</p>
Amount of funds	The total funding for Corporate/business RDI activities amounts 487.01 Billion HUF (1.57 million EUR). GINOP-2 contributes to this amount with 191.00 01

	Billion HUF (0.62 million EUR) incl. ESIF and national funds. (At 310.10 EUR/HUF)
Objectives	<ul style="list-style-type: none"> - enhance innovation performance of domestic companies (carried out alone or in cooperation with other undertakings) and increase of their competitiveness - enhance know-how of companies for own innovations - increase of effectiveness of internal processes in terms of innovation management and intellectual right protection - increase of number of domestic companies in positions of technology leaders - introduction of new products in the production and their placement on the market, especially global market
Eligible recipients	SMEs, Micros and Other undertakings if met special conditions (In GINOP sites/offices/labs in Central Hungary Region excluded)
Time plan for calls	The Hungarian Government decided to open all calls/actions till March 2017.

B) Knowledge transfer (Tudástranszfer)

- <https://www.palyazat.gov.hu/doc/4516>
- <https://palyker.fair.gov.hu/?kedvezmenyezettek=&fejlesztésiProgramok=>

Supported activities	<p>There is 1 call for proposal available to apply for grants (ESIF+national):</p> <ol style="list-style-type: none"> 1. GINOP-2.2.1-15; NVKP_16; VEKOP-2.2.1-16 - R&D competitiveness and excellence cooperation programmes (Open: 30.11.2015-30.11.2017)
Relevancy of this support programme	Relevant to Home Care R&I
Reasons of its relevance for Home Care R&I	<p>The call supports cooperation among undertakings, research institutions and universities, and public entities.</p> <p>The call focuses on the cooperation among existing excellences and for resulting new research capacities. Projects gaining support shall deliver new scientific and/or technical results, prototypes and/or intellectual properties in general, therefore could be well used also for home care segment. Furthermore projects must directly or at least indirectly contribute to the sectorial priorities of the National S3 (strategy) e.g. Healthy Society and Wellbeing / Inclusive Society, or target one of the smart technologies defined in the National S3.</p> <p>The call supports innovation projects focusing real market needs.</p>
Reasons of its relevance for quadruple-helix cooperation in R&I	<p>Only consortia may submit applications. The consortium shall consist of max 5 partners. One of the cooperating partners must be an undertaking, and in addition another partner must be a public organization, however, this public entity must be a research institution and/or university (or must do R&D as basic/main activity). Therefore, public in this context does not necessarily mean a player of the quadruple helix.</p> <p>Users / end users are not necessarily be involved, however the call supports</p>

	<p>innovation projects focusing real market needs.</p> <p>The call doesn't insist on working in quadruple helix, however, it is possible that partners establish quadruple helix cooperation. Involvement of stakeholders representing the demand side can be an advantage during the evaluation of the applications. Therefore inclusion of other relevant organizations (such as hospitals, social houses, informal care providers, regions, towns etc.) with user needs might be beneficial.</p> <p>Applicants are encouraged to form and improve partnership (consortium) based on their existing individual RDI technology platforms and ecosystems, and establish and/or increase strategic RDI clusters built on networks among industrial/business value chains and public/nonprofit research and knowledge transfer institutions. (5/50 points at the evaluation of the project proposals can be gained if at least 2 members of the consortium are in existing vendor relation or they are members of the same Accredited Innovation Cluster – AIC.)</p>
<p>Amount of funds</p>	<p>The total funding for Corporate/business RDI activities amounts: GINOP+VEKOP: 93.5 Billion HUF (301.5 million EUR). (At 310.10 EUR/HUF)</p>
<p>Objectives</p>	<p>General objectives:</p> <p>The action fosters long-term sustainable strategic cooperation among undertakings, research organizations and higher education institutions.</p> <p>The cooperation shall be established on existing excellence and result scientific outcome transferable to business. In addition the scientific and business outcomes shall deliver innovative solution to issues of social concern.</p> <p>Specific objectives:</p> <ul style="list-style-type: none"> - increasing intensity of R&D&I activities of beneficiaries - fostering delivery of new scientific and/or technical outcomes and intellectual creations/properties - increasing capacities and alliances for R&D&I activities - increase of number of organizations carrying out R&D&I activity - enhance of cooperation of companies with R&D organizations + HEIs - creation of qualified job positions resulting in development of knowledge economy - improving conditions of organizations to enter national and European R&D programmes <p>The grant is subject to the mandatory undertaking of the beneficiaries to gain industrial property right or to deliver tested prototype. Beneficiaries must also commit to develop products ready for business.</p> <p>Activities eligible for funding independently:</p> <p>Under support for research-development projects:</p>

	<p>I. Basic research (max 100% granting rate)</p> <p>II. Applied (industrial) research (max 50-80% granting rate, best for SMEs)</p> <p>III. Experimental development (max 25-60% granting rate, best for SMEs)</p> <p>Activities not eligible for funding independently (only connected to the activities eligible for funding independently)</p> <p>Within the framework of de minimis funding:</p> <p>IV. Activities relating to publicity</p> <p>V. Project coordination activities</p> <p>VI. Market entry: market presence (participation in fairs, expositions, conferences), preparation and procurement of marketing tools, industrial design, employment of marketing or business development manager.</p> <p>VII. Participation in conferences</p> <p>In the form of investment aid for research infrastructure related projects:</p> <p>VIII. Procurement of assets</p> <p>IX. Construction, expansion, rearrangement, modernization, renovation of buildings strictly necessary for the research infrastructure, and the necessary developments of basic infrastructure</p> <p>X. Procurement of immaterial assets</p>
Eligible recipients	<p>Partnerships of SMEs, LMEs, RDI organizations, HEIs and/or public entities (In GINOP sites/offices/labs in Central Hungary Region excluded)</p> <p>Only consortia may submit applications. The lead partner of the consortia has to be a SME or a large company.</p>
Time plan for calls	<p>Open: 30.11.2015-30.11.2017</p>

C) Research infrastructure (Kutatási infrastruktúra)

<https://palyker.fair.gov.hu/?kedvezmenyezettek=&fejlesztésiProgramok>

<p>Supported activities</p>	<p>There are 4 calls for proposals available to apply for grants (ESIF+national):</p> <ol style="list-style-type: none"> 1) GINOP-2.3.2-15; VEKOP-2.3.2-16 - Excellence of Strategic R&D centres (open: 16.11.2015-15.11.2017) 2) GINOP-2.3.3-15; VEKOP-2.3.3-15 - Research infrastructure development of Higher Education and Industry Cooperation Centres (open: 04.04.2016-04.04.2018) 3) GINOP-2.3.4-15; FIEK-16 - Research infrastructure development of Higher Education and Industry Cooperation Centres (open: 07.07.2016-27.09.2016 – now closed, final beneficiaries selected) 4) GINOP-2.3.6-15 - ELI laser research facility (closed call for predefined beneficiary: ELI-HU Nonprofit Ltd.) The ELI-ALPS infrastructure will provide the users, in the fields of scientific research and industrial applications. ELI-ALPS will produce high-brightness, high repetition rate, extremely ultrashort laser-based x-ray pulses. Facility features will open new research fields, and make new approaches feasible. Possible application areas include biomedical sciences, chemistry, climate research, energy, development of new materials, semiconductors, optoelectronics, and many more. http://www.eli-hu.hu/?q=en/01_What_is_ELI-ALPS%3F <p>Considering that call 4 was a restricted one for a predefined project/beneficiary, and call 1 and call 2 are available for R&D organization, only call 3 is dealt with (hereinafter referred to as FIEK-calls).</p>
<p>Relevancy of this support programme</p>	<p>Relevant both to Home Care R&I + quadruple-helix cooperation in R&I</p>
<p>Reasons of its relevance for Home Care R&I</p>	<p>FIEK-calls support cooperation among undertakings, research institutions and universities, and/or public entities. “FIEK” (Felsőoktatási és Ipari Együttműködési Központ) means Higher Education and Industry Cooperation Centre.</p> <p>The call focus on the cooperation among existing excellences and for resulting new research capacities. Projects gaining support shall deliver new scientific and/or technical results, prototypes and/or intellectual properties in general, therefore could be well used also for home care segment. Furthermore projects must directly or at least indirectly contribute to the sectorial priorities of the National S3 (strategy) e.g. Healthy Society and Wellbeing / Inclusive Society, or target one of the smart technologies defined in the National S3.</p> <p>The calls were open between 07.07.2016-27.09.2016, and the final beneficiaries have been already selected.</p> <p>Potentially the 3 winner consortia focuses on topics (at least partly) related to the health industry.</p> <p>The calls support innovation projects focusing real market needs.</p> <p>The calls offer grant for process-innovation too (max 5% of total eligible budget of projects) in order to develop/utilize new or improved methods for production or providing service (including major changes in techniques, equipment or software).</p>
<p>Reasons of its relevance for quadruple-helix</p>	<p>The calls were open between 07.07.2016-27.09.2016, and the final beneficiaries have been already selected. All the consortia are led by one of the major</p>

<p>cooperation in R&I</p>	<p>universities of Hungary, which have existing exploitable knowledge base and innovation ecosystem with stakeholders from SME and large business sector and a network of own and partner clinics/hospitals, varying research institutions and HEIs, chambers, local and regional municipalities and financial institutions.</p> <p>Most of the partnerships are based on viable cluster cooperation built on the above mentioned innovation ecosystems.</p> <p>Although there was no direct requirement related to quadruple helix cooperation, most of the consortia have already begun working in this system (or one quite familiar).</p>
<p>Amount of funds</p>	<p>GINOP-2.3.4-15 (ESIF+National resources): a total budget of HUF 26,86 billion (approx. EUR 85,6 million) + FIEK-16 (Nation resources): a total budget of HUF 8 billion (approx. EUR 25.5 million), financed from the NRDI Fund.</p> <p>(At 313.73 EUR/HUF)</p>
<p>Objectives</p>	<p>Fostering establishment of cooperation between industry and higher education which:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> is suitable for: <ul style="list-style-type: none"> - creation of R+D+I capacities meeting the needs of the industrial partners, - development of competitive products and services, - development of competitive production of goods, <input checked="" type="checkbox"/> helps partner companies to keep or make their products marketable and/or reaching a major milestone in the product or production development. <p>The grant is subject to the mandatory undertaking of the beneficiaries to increase their staff for R&D activities. Beneficiaries must also commit to develop products ready for business. In addition beneficiaries have to select at least 3 of the following obligations:</p> <ol style="list-style-type: none"> 1. increase number of publications 2. gain industrial property right 3. create spin-off enterprise and deliver tested prototype 4. increase number of topics for doctoral students/candidates. <p>Activities eligible for funding independently:</p> <p>Under support for research-development projects:</p> <ol style="list-style-type: none"> I. Basic research (max 100% granting rate) II. Applied (industrial) research (max 50-80% granting rate, best for SMEs) III. Experimental development (max 25-60% granting rate, best for SMEs) <p>Activities not eligible for funding independently (only connected to the activities eligible for funding independently)</p> <p>Within the framework of de minimis funding:</p>

	<p>IV. Activities relating to publicity</p> <p>V. Project coordination activities</p> <p>VI. Market entry: market presence (participation in fairs, expositions, conferences), preparation and procurement of marketing tools, industrial design, employment of marketing or business development manager.</p> <p>VII. Participation in conferences</p> <p>In the form of investment aid for research infrastructure related projects:</p> <p>VIII. Procurement of assets</p> <p>IX. Construction, expansion, rearrangement, modernization, renovation of buildings strictly necessary for the research infrastructure, and the necessary developments of basic infrastructure</p> <p>X. Procurement of immaterial assets</p>
Eligible recipients	<p>FIEK-calls:</p> <p>Partnerships of SMEs, LMEs, RDI organizations, HEIs and/or public entities (In GINOP sites/offices/labs in Central Hungary Region excluded)</p> <p>Only consortia may submit applications. The lead partner of the consortia has to be a university.</p>
Time plan for calls	<p>The calls were open between 07.07.2016-27.09.2016 – now closed, final beneficiaries are selected:</p> <p>GINOP-2.3.4-15 (ESIF+National resources): 4 consortia</p> <p>FIEK-16 (Nation resources): 3 consortia.</p>

Evaluation of applications

Evaluation process for applications set up the same way for all support programmes calls?	No, it is different for various support programmes / calls
Where are the evaluators from?	From the partner country
Who evaluates applications of each of the support programme / intervention area call?	<p>In the 2nd funding priority axis of EDIOP (and the mirror calls in HHCOP):</p> <p>1st level evaluation of the professional content:</p> <p>NRDI Office evaluates:</p> <ul style="list-style-type: none"> • the formal requirements of applications for funds • the professional content of the submitted applications (project ideas) • decides on the approval if a project proposal is ready to enter the 2nd level. <p>2nd level evaluation of the professional content:</p>

	<p>The IB (MoNE) evaluates:</p> <ul style="list-style-type: none"> • the formal requirements of applications for funds • the professional content, the implementation plan (incl. management structure, feasibility, timing and cash-flow plan) of the submitted applications (detailed project proposals) <p>The MA (MoNE):</p> <ul style="list-style-type: none"> • decides on the approval if a project proposal is ready to be subsidized. • concludes the contract for granting.
<p>Which evaluation criteria are used with what weight in each of the support programme.</p>	<ol style="list-style-type: none"> 1. Formal yes/no (binary), e.g. if the legal form and/or type of the beneficiaries make them eligible to apply for grant in a call 2. Conditions at beneficiary (resources, competences, personal) 3. Quality of the application - defined by each set up call detailed conditions 4. Economical effectiveness and/or marketability 5. Excellence, networking experiences 6. Regional impact 7. Special professional, policy or economical requirements subject to the topic of the call <p>Points 1-3 are set up by each call.</p>

Governance of the relevant thematic priority axis of the Operational Programme

<p>Main management bodies that influence the OP</p>	<p><u>The Managing Authorities (MA)</u> for EDIOP (GINOP) and CCHOP (VEKOP) are in the Ministry for National Economy of Hungary (MoNE). EDIOP's MA is the Deputy State Secretariat of Economic Development Programmes, while CCHOP's MA is the Deputy State Secretariat of Regional Development Programmes.</p> <p><u>Authorities responsible for policy:</u> The ministry (MoNE) is responsible for defining the policy, the implementation and the professional content of EDIOP and CCHOP in general. As a special case, the National Research, Development and Innovation Office (NRDI Office) is responsible for defining the policy, the implementation and the professional content of the 2nd funding priority axis of EDIOP (and the mirror calls in HHCOP). NRDI Office is not only responsible for preparing the annual or multiannual work plans (and calls) in the priority axis, but it is the professional evaluating body of the submitted applications for RDI grants as well.</p> <p><u>Monitoring Committees (MC):</u> There are MCs at OP level (OP MC) for each operational programmes and one at Partnership Agreement level (PA MC). The OP MCs are responsible for the monitoring and evaluation of EDIOP and CCHOP. The presidents of the OP MCs are appointed by the Prime Minister. The PA MC ensures accordance among the operational programmes. Its president is appointed by the Prime Minister too.</p>
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	<p><u>The Government</u> approves the Annual Development Framework (ADF) of the OPs.</p> <p>The ADFs define the content and the budget of the calls and restricted calls for predefined projects of the OPs. A call defined in one of the ADFs may be open for more than one year.</p> <p><u>Coordination Committee for Development Policy</u> prepares and proposes the decisions of the Government. This committee took over most duties of the ex Government Commission of National Development in January 2016. Some duties belong directly to the Government or were taken over by the <u>Minister responsible for utilization of EU funds</u>, who coordinates the planning of the ADFs, manages consultation with social and professional partners and the general public, and publishes the calls for proposals.</p> <p>As <u>intermediate bodies (IB)</u> in Hungary are managed by the ministries generally responsible for defining the policy, the implementation and the professional content of the operational programmes, the IB of EDIOP and HHCOP are in the MoNE and directly reports the Deputy State Secretary of Economic Development Programmes (who is the head of the MA). A specific actor - the Hungarian Development Bank - is involved in the implementation of the 8th funding priority axis (of EDIOP) as financial intermediate body for the Financial Instruments.</p>
Possibilities to influence the OP outside of committees?	yes
How?	<ul style="list-style-type: none"> - When (before the approval of ADFs/calls/restricted calls) consultations with social and professional partners and the general public take place - Through the activity of the members of the monitoring committees delegated by ministries, chambers, associations or other social partners - Cooperation agreement with the MAs (e.g. ÁEEK concluded one agreement with EDIOP MA to implement cooperation in Interreg Europe projects)

2. SMART specialization strategy – RIS3

The “SMART specialization strategy – RIS3” section provides more detailed information on defined RIS3 in the region and the main supported R&I areas contributing to Home Care R&I.

SMART specialization strategy on the same level as above described Structural Fund? (e.g. national-national, regional-regional)	yes
RIS3 R&I specialization segments contributing to Home Care R&I support?	<p>The first sector development priority of RIS3 (in Hungary) is fostering health industry. One of its horizontal priorities are strengthening innovation cooperation, i.a. international cooperation targeting innovative knowledge base of excellence.</p> <p>Objectives of the RIS3 (incl. the priority “Healthy society & wellbeing”) are implemented through SF programmes, primarily through PA1, PA2 and PA8 of GINOP (EDIOP).</p> <p>Approved projects (subsidized by GINOP actions) must directly or at least indirectly contribute to the sectorial priorities of the National RIS3 (strategy) e.g.</p>

	<p>Healthy Society and Wellbeing / Inclusive Society, or target one of the smart technologies defined in the National RIS3.</p> <p>These requirements are addressed at national level.</p>
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3. Other policy instruments relevant for Home Care R&I

The “other policy instruments relevant for Home Care R&I” section provides more detailed information on other policy instruments supporting R&I in Home Care, following the same description as for the Operational Programme described above.

National Research, Development and Innovation Fund (NRDI Fund)

Nemzeti Kutatási, Fejlesztési és Innovációs Alap (NKFI Alap)

<http://nkfih.gov.hu/funding/portfolio-of-calls-to/calls-of-the-national>

<http://nkfih.gov.hu/palyazatok/hazai-kfi-palyazatok/nkfia-palyazatok> (HU version contains more info)

Geographical coverage	national
Managing Authority	National Research, Development and Innovation Office (NKFIH)
Intermediate body	N/A
General objectives	<p>Provide state (national) support for research, development and innovation. According to the Law on Public Finance the NFDI fund is separated state fund".</p> <p>The Fund provides grants for</p> <ul style="list-style-type: none"> • Basic research and/or • Applied (industrial) research and/or • Experimental development.
Names of priority axes supporting Home Care R&I	N/A
Specific objectives of the given priority axis	N/A
Support programmes relevant for Home Care R&I available in this policy instrument?	<p>No specific programme for home care. Most calls are mirror actions for GINIOP (EDIOP), but there are calls for multilateral and bilateral international cooperation, collaboration and networking, and in addition special calls for priority areas for RDI strategy. The Fund provides grants and/or assistance for preparation to enter into projects implemented by international partnerships (e.g. H2020) or participate in calls such as AAL.</p> <p>There are special grants offered predefined programmes such as National Cardioprogramme.</p>

Human Resources Development Operational Programme (HRDOP)

Emberi Erőforrás Fejlesztési Operatív Program (EFOP)

https://www.palyazat.gov.hu/az_europai_bizottsag_altal_elfogadott_operativ_programok_2014_20

Geographical coverage	national
Managing Authority	Ministry of Human Resources - Minister of State for Social Affairs and Inclusion, Ministry of Human Resources
Intermediate body	Ministry of Human Resources - Minister of State for Social Affairs and Inclusion, Ministry of Human Resources
General objectives of the policy instrument	Human Resources Development Operational Programme (HRDOP) will increase the human capital and improve the social environment in Hungary. This OP was designed for contributing to address social and demographic challenges. The main interventions cover social inclusion, strengthening social cohesion and the role of the family, health promotion and prevention, improving the quality of public education, increasing the number of people who have tertiary education and strengthening the staff of social institutions.
Names of priority axes supporting Home Care R&I	<ol style="list-style-type: none"> 1- Cooperating society (Az együttműködő társadalomról szóló 1. prioritás) - Specific objectives relevant to Home Care R&I: Increasing health awareness in the public / Improving the quality of public services in health-care, social, social inclusion and cultural areas - incl. deinstitutionalization, or eHealth /mHealth / telehealth. 2- Infrastructure investments for strengthening social cooperation (Az infrastrukturális beruházások a társadalmi együttműködés erősítése érdekében című 2. prioritás) - Specific objectives relevant to Home Care R&I: Improving access to high quality public services in health-care, social, social inclusion and cultural areas. 3- Growing knowledge capital (A gyarapodó tudástökről szóló 3. prioritás) - Specific objectives relevant to Home Care R&I: Increasing research, innovation and smart specialization in humanities. 4- Infrastructure investments for the growing knowledge capital (Az infrastrukturális beruházások a gyarapodó tudástöke érdekében című 4. prioritás) - Specific objectives relevant to Home Care R&I: Servicing capacity of the tertiary educational infrastructure subject to development and modernization and of the infrastructure serving informal and non-formal learning. 5- Use of financial assets to strengthen social cooperation; social innovation, transnational cooperation (Pénzügyi eszközök alkalmazása a társadalmi együttműködés erősítése érdekében, valamint társadalmi innováció és transznacionális együttműködések című 5. prioritás) – Specific objectives relevant to Home Care R&I: <ol style="list-style-type: none"> A. Supporting social inclusion with financial assets B. Improving social innovation

Specific objectives of the given priority axis	As described above.
Support programmes relevant for Home Care R&I available in this policy instrument?	<ul style="list-style-type: none"> - Deinstitutionalization, - National eHealth System (incl. mHealth & telehealth) - SKILL LABs - Pilot projects for improving social innovation

Territorial and settlement development OP (TSDOP)

TERÜLET- ÉS TELEPÜLÉSFEJLESZTÉSI OPERATÍV PROGRAM (TOP)

https://www.palyazat.gov.hu/az_europai_bizottsag_altal_elfogadott_operativ_programok_2014_20

Geographical coverage	regional
Managing Authority	TSDOP's MA is the Deputy State Secretariat of Regional Development Programmes in the Ministry for National Economy of Hungary (MoNE). Nemzetgazdasági Minisztérium Regionális Fejlesztési Programok Irányító Hatósága
Intermediate body	Hungarian State Treasury Magyar Államkincstár
General objectives	<p>Territorial and settlement development OP (TSDOP) aims to support regional, decentralized economic development and an increase in employment based on local resources. The programme allocates more than EUR 1 billion to integrated sustainable urban development actions in the framework of a dedicated priority.</p> <p>The Programme focuses on the following priorities: (1) Creating local conditions to boost economic growth and increase employment (2) Enterprise friendly and population preserving urban development</p>
Names of priority axes supporting Home Care R&I	<ol style="list-style-type: none"> 1. Improving regional economic environment (Térségi gazdasági környezet fejlesztése a foglalkoztatás elősegítéséről szóló 1. prioritás). Specific objectives relevant to Home Care R&I: Developing industrial parks; Local economic development; Developing technology and/or business incubator houses. 2. Strengthening of local communities and cooperation (A helyi közösségi szolgáltatások fejlesztéséről és a társadalmi együttműködés erősítéséről szóló 4. prioritás). Specific objectives relevant to Home Care R&I: Developing social basic services (infrastructure) 3. Developing county and local human resources, promoting employment and developing social cooperation (Megyei és helyi

	<p>emberi erőforrás-fejlesztésről, foglalkoztatás-ösztönzésről és társadalmi együttműködésről szóló 5. prioritás). Specific objectives relevant to Home Care R&I: Strengthening social cooperation (complex, local programs)</p> <p>4. Sustainable urban development (Fenntartható városfejlesztés a megyei jogú városokról szóló 6. prioritás). Specific objectives relevant to Home Care R&I: Developing industrial parks; Local economic development; Developing incubator; Developing social basic services (infrastructure); Developing primary (health and social) care (infrastructure)</p>
Specific objectives of the given priority axis	As described above.
Support programmes / intervention areas relevant available in this policy instrument?	<p>Development of industrial parks,</p> <p>Development of technology and/or business incubators</p> <p>Development of primary (health and social) care</p>

4. Regional innovation ecosystem in Home Care R&I

The “regional innovation ecosystem in Home Care R&I” section provides more detailed view on regional innovation ecosystem in Home Care R&I including a general description overview of the ecosystem followed by a list and a description of the most important supporting platforms, networks, events, major projects carried out already and most significant actors in all 4 helixes of quadruple-helix cooperation approach – formal and informal providers of health care, businesses, research and public institutions – who might work together to drive new innovations in Home Care.

Summary description of regional innovation ecosystem in Home Care R&I

Summary description of regional innovation ecosystem in Home Care R&I including the most significant main actors, infrastructure, resources, available public / private supporting services, networks, platforms and events) (max. 5000 characters)

There are several actors in home care sector in Hungary. Generally all the helixes of QHC are represented by them. They have various associations (mainly representing members of one specific industry, e.g. ICT or hospice or health technology) that provide regular possibilities for networking. Generally R+D+I partnerships are not organized by associations, but universities and/or major enterprises. SMEs and non-profit organizations undertake in initiating innovation partnership if a call or a granting scheme fosters to do so. There are special partnerships for establishing innovation clusters or QHC in general or specialised in healthcare, medical or pharmaceutical development. Among them you can find some that have been engaged with homecare innovation too.

The most important stakeholders from the “formal and informal providers of healthcare, elderly care recipients and associations in Home Care R&I” can be found among the members of the Hungarian Association for Home Care and Hospice (MOHE); the Hungarian Hospice-Palliative Association (HHPA); and Hungarian Hospital Association (HHA). There are some active organizations which initiate or take part in R+D+I projects (fairly) frequently such as the Rehabilitation Centre for Physically Disabled People (MEREK) or the Hungarian Charity Service of the Order of Malta (MMSz). There are further organizations on the “users” side whose membership are and could be involved in R&I too. E.g.: Hungarian Alliance of Patients' Organisations (BEMOSZ); Association of Hungarian Medical Societies (MOTESZ); Association of Hungarian Health Visitors (MAVE); Chamber of Hungarian Health Care Professionals (MESZK); the Hungarian Medical Chamber; and the Hungarian Chamber of Pharmacists (MGYK).

Businesses and business supporting actors can be found inter alia among the members of the ICT, health technology, diagnostic and pharmaceutical sectors and/or medical clusters, science and technology parks. The research helix is represented by all the universities which have medical and/or technology faculties, and there are public, non-profit and for-profit research organizations. Both the research and business helixes have been involved and interested in further innovation activities in home care sector since they recognized the importance of the shift from hospital care and the increasing willingness of patients, families and employers to co-pay for (invest in) prevention, screening, monitoring and telecare.

Public is a key stakeholder in homecare R+D+I in several aspects: Ministries and authorities are responsible for preparing and implementing strategies (health, industry, R+D+I, employment, etc.). Among of the tools for implementation (these strategies) there are operational programmes managed by the ministries. As a special actor the National Research, Development and Innovation Office (NRDI Office) is responsible for defining the policy, the implementation and the professional content of the 2nd funding priority axis of EDIOP (Research, technological development and innovation). Other public bodies are responsible for the governance and development of public care providers, while another one manages the National Insurance Fund. Some authorities are engaged in health technology assessment, permissions and licencing.

Existing platforms, networks and events supporting Home Care R&I

<p>Existing platforms / networks supporting Home Care R&I</p>	<ul style="list-style-type: none"> - Hungarian Association for Home Care and Hospice - Hungarian Hospice-Palliative Association - Association of Hungarian Medical Societies - ICT ASSOCIATION OF HUNGARY (IVSZ) - Association of Health Technology Suppliers and Medical Device Manufacturers, Hungary - Association of Medical Device Manufacturers, Hungary - Association of Innovative Pharmaceutical Manufacturers - Hungarian Medical Instruments Producers and Service Providers Cluster
<p>Existing regular events (both formal and informal) supporting Home Care R&I</p>	<ul style="list-style-type: none"> - Annual Business Innovation Conference of IVSZ (VÁLLALATI INNOVÁCIÓ KONFERENCIA) – News, trends and impact of disruptive innovation on competitiveness of business organizations, their management and workforce. This year the cases and learnings of innovation at non-ICT sectors are in the focus of the event in May 2017. - MEDIKLASZTER annual general assemble and conference - Annual national assemble and conferences of Hungarian Hospice-Palliative Association - Annual conference of Hungarian Hospital Association - Annual conference of Chamber of Hungarian Health Care Professionals - “MEDICINA conferences” of the Association of Hungarian Medical Societies - Conferences organized by the Hungarian Association for Home Care and Hospice (MOHE) or the Hungarian Hospice-Palliative Association (HHPA)

Main actors in Home Care R&I

in all 4 helixes of quadruple-helix model – formal and informal providers of health care, businesses & business supporting actors, research and public institutions

4.1. Citizens / users helix

Main formal + informal providers of healthcare, elderly care recipients / associations in Home Care R&I	
Name + website	Description of activities focused on in that field
<p>Magyarországi Otthonápolási és Hospice Egyesület</p> <p>http://mohe.hu/</p>	<p>Hungarian Association for Home Care and Hospice (MOHE)</p> <ul style="list-style-type: none"> - Coordinates professional and scientific work of members - Members provide home care and hospice services in Hungary - Assists networking in and outside the sector in Hungary and abroad - Aims to develop professional environment of home care and hospice
<p>Magyar Hospice-Palliatív Egyesület</p> <p>https://hospice.hu/en/</p>	<p>Hungarian Hospice-Palliative Association (HHPA)</p> <p>Each year they summarize and publish the results of statistical data and send them to member organizations and policy makers, respectively present them in national and international conferences. The Association regularly informs national hospice organizations about trainings, events, applications, laws etc. on our website www.hospice.hu</p> <p>HHPA elaborated the legal documents of hospice-palliative care in Hungary as the Hospice and patient's right chapters of the Health Care Act (1997); National Guidelines (2000 and 2002) and Minimum Standards (2004). In 2003 HHPA initiated a Parliamentary examination with human rights and patients' rights organizations to include the hospice care into the health care system.</p> <p>Since 1995 the Association has organized accredited basic and further trainings in palliative care for health care professionals. By 2008, more than 3800 people participated in our training sessions.</p> <p>HHPA published a series entitled 'Hospice Patient Care' and 23 other teaching materials were published with the participation of the Association. They translated a lot of documents into Hungarian, among others the Recommendation Rec (2003) 24 of the Committee of Ministers to member states on the organization of palliative care (Council of Europe, 2003)</p> <p>HHPA organizes annual conferences on hospice and palliative care providing a forum for sharing practical experience and scientific knowledge.</p> <p>Members of HHPA provide home care and hospice services in Hungary.</p>
<p>Magyar Kórházzövetség</p> <p>http://www.korhazszovetsseg.hu/</p>	<p>Hungarian Hospital Association (HHA)</p> <p>Its mission is to promote improvements in the health of citizens and a uniformly high standard of hospital care in Hungary, fostering efficiency, effectiveness and humanity in the organization and operations of hospital and health services, increase patient safety in practice and manage risks to patient safety and quality in healthcare. Integrated solutions of hospital and home care are important ways in fostering efficiency, effectiveness and patient safety.</p> <p>Members of HHA provide inpatient and outpatient services in Hungary. Some members have developed and run home care services as well (e.g. "Bethesda Otthonápolási Szolgálat" – Home care nursing and hospice services for children)</p>

<p>Magyar Orvostársaságok és Egyesületek Szövetsége</p> <p>http://www.motesz.hu/</p>	<p>Association of Hungarian Medical Societies (MOTESZ)</p> <p>An umbrella organization of various medical associations in Hungary with the aim:</p> <ul style="list-style-type: none"> - To encourage and support the progress of scientific and professional excellence as well as its achievements in practice; - To promote free movement of medical doctors and patients as well as the implementation of continuous coordination needed to free market of medicines and medical equipment within the European Union; - To promote establishment of widespread International cooperation to find appropriate solutions for the issues relating Health Care; - To promote, coordinate and represent the professional interests of the MOTESZ's member-societies in national and international organizations; - To accomplish the Hungarian health care and the legislative process having effect on medicine in Hungary; - to support and encourage the attainment of the highest level of medical education, medical services in order to provide the best quality treatment.
<p>Magyar Védőnők Egyesülete (MAVE)</p> <p>http://www.mave.hu</p>	<p>Association of Hungarian Health Visitors (MAVE)</p> <p>The health visitor's duty is to monitor a pregnancy and give advice to new mothers, and they usually visit the family before and after a birth. It is up to the local health visitor how often they visit a family, and unless they consider a family in need of medical guidance, they only visit a few times. Parents of babies and toddlers are required to visit their paediatrician or their health visitor for routine check-ups and the child's development is recorded in their vaccination book. Health visitors also have to check if the obligatory vaccines have been given. Vaccinations, however, are given by the child's paediatrician. Paediatricians take care of routine check-ups, vaccinations, and any health problems. Each district is assigned several paediatricians, but parents are free to choose one in a different district if they wish. The health visitor arranges a meeting with the paediatrician and they work together as a team.</p>
<p>Magyar Egészségügyi Szakdolgozói Kamara</p> <p>http://www.meszk.hu/info.aspx?sp=1</p>	<p>Chamber of Hungarian Health Care Professionals (MESZK)</p> <p>One of the main activities is to organize training and further education of qualified healthcare workers and to develop curricula of training and education.</p> <p>Members of the Chamber are qualified healthcare workers (hospital/GP/homecare nurses and other health care professionals)</p>
<p>Magyar Orvosi Kamara (MOK)</p> <p>http://www.mok.hu</p>	<p>Hungarian Medical Chamber</p> <p>Membership is voluntary for all physicians in Hungary. Tasks and responsibilities:</p> <ul style="list-style-type: none"> - To represent the interests and prestige of medical doctors - To take part in contract discussions with insurance companies - To organize the obligatory Continuing Medical Education / Continuing Professional Development (CME / CPD), and to assure its quality - To cooperate with the civil organizations working in the field of health - Publication of medical information for members and the public

<p>Mozgássérült Emberek Rehabilitációs Központja (MEREK) www.merek.hu</p>	<p>Rehabilitation Centre for Physically Disabled People (MEREK)</p> <p>MEREK is operated and financed by the General Directorate for Social and Child Protection, which organization is operated by the Ministry of Human Capacity's. The goal of the MEREK is to help the social integration of people with physical disabilities through complex rehabilitation services. Its mission is to achieve that people with disabilities possess real self evaluation, to use their opportunities in a wise way, and also to become conscious of the fact that without sufficient expression of their needs they will not be able to live an independent life even with professional help. Using the available financial resources and the ideas of our colleagues we created an environment adapted to the personal needs of our clients. Our professionals possess and practice the most developed techniques in rehabilitation. Professional groups and services:</p> <ul style="list-style-type: none"> - Personal Care Team: accommodation with or without personal care, medical services; one -to- one personal assistance - Physiotherapy Team: physiotherapy, sport activities; - Social Team: social rehabilitation, individual and group services, spare-time activities, temporary social services - Psychology Team: personal case management, group work, evaluation of skills; - Occupational Therapy-Group: employment evaluation, probation and permanent workplaces; - Computer Skills and Pedagogy Group: computer courses, preparation for independent life, communication skills, foreign language, media, basal therapy; - Complementary services such as providing internet access to enable physically disabled people to get the latest information about employment opportunities, thus getting closer to the open labour market. <p>With the help of an EU-financed Phare programme MEREK established a sports- and life aids workshop. The work is done with the professional support of physiotherapist and an orthopedist using ICF-based (International Classification of Functions and Disability) evaluation. The services of the workshop and the available equipment can be found at www.gurulo.hu . MEREK also uses EU-funds to create a national network of such workshops offering mobility equipments to find the personal needs of people with disabilities.</p>
<p>Magyar Máltai Szeretetszolgálat (MMSz) http://www.maltai.hu/</p>	<p>Hungarian Charity Service of the Order of Malta (MMSz)</p> <p>MMSz assumed to find an innovative solution with developing WEBNOVER.HU to support informal helpers (meeting needs for easily available, simple training material, including audio-visual elements regarding simple care tasks). The aim of the development is to provide informal helpers with information through the training material available at a website, which can be used during their daily care and nursing activities. When designing the Hungarian WebNover.hu site, the Hungarian Charity Service of the Order of Malta attempted to collect all the information and support that informal helpers might need during their everyday work. As most of them are not professional caregivers, the accomplishment of apparently simple care activities may be difficult for them. The 45 short tutorial videos offer them help to learn and carry out safely the basic home care tasks.</p>
<p>Betegszervezetek Magyarországi Szövetsége</p>	<p>HAPO - Hungarian Alliance of Patients' Organisations (BEMOSZ)</p>

<p>(BEMOSZ) http://www.bemosz.hu/</p>	<p>BEMOSZ was founded in autumn 2013 by 12 patient organizations as a truly grassroots alliance to represent the interests of patients at national level, and to cooperate with like-minded stakeholders at European and international level.</p> <p>BEMOSZ is a member of the European Patients' Forum (EPF), the umbrella organization that works with patients' groups in public health and health advocacy across Europe.</p>
<p>Magyar Gyógyszerészi Kamara (MGYK) http://www.mgyk.hu/</p>	<p>Hungarian Chamber of Pharmacists (MGYK)</p> <p>Issues "Patika Magazin" (http://www.patikamagazin.hu) to develop citizens' understanding and knowledge about health, diseases, medicines, available services (e.g. home care) and patients' organizations. (http://www.patikamagazin.hu/betegszervezetek/)</p>

4.2. Business helix

Main businesses and business supporting actors in Home Care R&I		
Name + website	Business or business supporting actor	Description of highly innovative solutions provided in that field
<p>ICT ASSOCIATION OF HUNGARY</p>	<p>Business supporting actor</p>	<p>Informatikai, Távközlési és Elektronikai Vállalkozások Szövetsége (IVSZ)</p> <p>IVSZ is the largest and most significant leading interest group of the Information and Communication Technologies industry in Hungary. The association is constantly operating as a joint platform for information technology, telecommunications and electronics sectors since it was founded in 1991.</p>
<p>Hungarian Association of Science and Technology Parks http://www.mattip.hu/</p>	<p>Business supporting actor</p>	<p>Magyar Tudományos Technológiai és Ipari Parkok Szövetsége (MATTIP)</p> <p>MATTIP is the association for businesses, organizations, municipalities and professionals pooling scientific, technological and industrial parks success.</p> <p>MATTIP promotes the creation of industrial parks, the development and successful operation of interested businesses, organizations, government and trade association for professionals.</p> <p>MATTIP provides for its members advocacy, sharing of best practices, consulting and other support and makes available the professional knowledge accumulated by the members through sharing experience to support the policy.</p> <p>The association provides services to help Member Parks with settling micro, small and medium-sized enterprises (SMEs) as well as fundraising and innovation management.</p>
<p>Association of Health Technology Suppliers and Medical Device Manufacturers, Hungary http://www.etosz.hu/en/</p>	<p>Business supporting actor</p>	<p>Egészségügyi Technológiai és Orvostechnikai Szállítók Egyesülete (ETOSZ)</p> <p>The Association of Health Technology Suppliers and Medical Device Manufacturers (Hungarian acronym is ETOSZ) is the organization for the interest representation of Hungarian</p>

		<p>health technology and medical device manufacturing sector. The purpose of ETOSZ and its member companies is to reach the highest health benefit and to improve the health status of the Hungarian society by providing high level services for those enlisting the health services. ETOSZ supports these purposes by providing health technology and medical devices at a socially useful and sustainable level for both financiers and suppliers.</p> <p>The main purpose of ETOSZ is to provide modern and innovative technologies for the treatment of Hungarian patients supported by the below activities:</p> <ul style="list-style-type: none"> - Support of the widespread availability and admission of innovative therapies, procedures and technologies - Stabilization of health care financing - Development of general opinion– domestication of the single approach of health industry.
<p>Association of Medical Device Manufacturers, Hungary</p> <p>http://www.mdma.hu/english/cegism.html</p>	<p>Business supporting actor</p>	<p>Magyar Medikai Gyártók és Szolgáltatók Szakmai Szövetsége</p> <p>The Association of the Hungarian Medical Device Manufacturers was founded in 1994. Its members -mainly Hungarian-owned companies- manufacturers and suppliers work on the medical field.</p> <p>The Association's main tasks and goals are the following:</p> <p>The Association's initiate, coordinate and organize the concerted presence in those questions which might arise in the enforcement of the members' interest as follows:</p> <ul style="list-style-type: none"> - Representation of the professional interests at the authorities - Settlement of the information and prognostic systems into operation assisting the sector's general interests - General and unique connection maintenance towards mass communications - Putting the Hungarian medical devices' good quality into common knowledge furthermore lobby activities on every possible forum in order to enforce the Hungarian companies' interests - Continuous and long-term co-operation and connection keeping with corporate and/or other professional organizations working in the sector.
<p>Hungarian In Vitro Diagnostic Association</p> <p>http://hivda.hu/english/</p>	<p>Business supporting actor</p>	<p>Magyar Diagnosztikum Gyártók és Forgalmazók Tudományos, Ismeretterjesztő és Érdekvédelmi Egyesülete.</p> <p>Established in 1999 as the Hungarian member association of MedTech Europe, HIVDA aims at representing and protecting the interests of its members towards health care authorities, other similar associations and our customers.</p>

<p>Hungarian Pharmaceutical Manufacturers` Association http://www.magyosz.org/hu</p>	<p>Business supporting actor</p>	<p>Hungarian association promoting professional and trade interest of pharmaceutical companies that have local manufacturing plants in Hungary and typically produce generics;</p> <p>MAGYOSZ supports the Central Eastern European Pharmaceutical Manufacturing Excellence Award.</p>
<p>Association of Innovative Pharmaceutical Manufacturers http://aipm.hu/en?en/home</p>	<p>Business supporting actor</p>	<p>The Association represents 26 research and development oriented pharmaceutical companies in Hungary, which are determinant participants on the foreign and Hungarian pharmaceutical market, and account for more than 50% of the domestic medicine turnover. The parent companies of the member firms develop novel innovative medicines that present a breakthrough in the treatment of diseases that cannot be treated at all or not with the proper efficacy.</p> <p>AIPM plays an active role in involving Hungary in European programmes that aim at more efficient healing, fruitful research and development, as well as improvement in the population's health-related awareness.</p>
<p>Hungarian Medical Instruments Producers and Service Providers Cluster http://mediklaszter.eu/</p>	<p>Business supporting actor</p>	<p>MediCluster- a network of business companies- (29 members at present) was created in 2006 by member companies of the Hungarian Association of Medical Manufacturers and Service Providers, who are leading players of Hungarian medical technology industry. The business activities of the companies include the development, production, distribution and support of medical equipment, and provide services on a profit-oriented or non-profit basis, or perform activities and/or provide professional-scientific support related to the above.</p> <p>MediCluster received the title of the 'Accredited Innovation Cluster in 2008 and implemented 3 innovative development projects (Development of Export-Promoting Incubator House, Laser Development Project and Project for the Development of Hospital Services) in the framework of the New Hungary Development Plan, Pole Programme'.</p>
<p>Biotechnology Innovation Base Cluster http://www.peik.hu/Home/Details/bib_klaszter</p>	<p>Business supporting actor</p>	<p>The cluster focuses on the healthcare industry and medical biotechnology, including the development, manufacture and distribution of in vitro diagnostics (IVD) devices. Within the framework of the industry-level network, the long-term goal is to develop so-called "orphan" products for preventing, diagnosing and treating rare diseases. The product development activity is expressly SME-oriented, which is in perfect harmony with the composition of the members of the BIB Cluster.</p> <p>The PEIK project (DDOP-1.1.3-11-2011) - ensures the faster, more competitive utilization of the finished, ongoing and planned developments. The essential condition of it is the establishing of the technological platform, the cell- and tissue culture laboratory, which allows the further R+D+I activities and small production capacity, which supports the market</p>

		enforcement of the most important product category, the in vitro medical technology devices.
PharmAgora Quality of Life Cluster http://pharmagoraklaszter.eu/pharmagora_cluster.php	Business supporting actor	PharmAgora Quality of Life Cluster. was established in 2007 with the aim to establish cooperation among bigger companies and SMEs (currently out of the 25 members 19 are SMEs) to cover a larger part of the pharmaceutical and health market, in order to be able to offer more complex services and to create a common platform that helped to strengthen market positions of the member companies. Running projects of the Cluster aim at innovative areas as: functional food products, nutritional supplements, drug combinations, corresponding instrument developments and clinical data management, biostatistics and comprehensive, rigorous quality assurance. The Cluster achieved significant results that were acknowledged by the Accredited Innovation Cluster title, and was also awarded with the European Cluster Management Excellence label in BRONZE.
FEDERATION OF HUNGARIAN CLUSTERS http://mksz.eu/en/	Business supporting actor	The aim of the Federation is to provide the Hungarian clusters services of representation and validation of interest that enhance their development. They co-operate with its partners, with policy makers, most importantly with organizations coordinating clusters, federations of employees and employers, chambers of commerce, and the competent government bodies. The Federation turns its attention especially to SMEs, their attachment to clusters and the improvement of their competitiveness and innovative activities. The Federation's priority aim is to validate the interest of its members in the institutions of the EU. It operates a forum for cluster and leaders. The organization attempts to influence the legislation and the executive power ; if needed, it prepares its own propositions of legislations and represents the opinions, propositions of its members in order to reinforce the role of clusters.

4.3. Research helix

Main research actors in Home Care R&I	
Name + website	Description of excellent research activities done in that field (e.g. patents in this field)
UNIVERSITY of DEBRECEN Faculty of Medicine Faculty of Health Faculty of Informatics Faculty of Pharmacy Faculty of Public Health Faculty of Science and Technology	The university's RDI strategy focuses not only on basic research but also on the effective matching of applied research and commercially profitable development projects this way providing an incentive for research that creates value for society and the economy. - Project : SROP (TÁMOP-4.2.1.C-14/1/Konv-2015-0004) The establishment of "science park" serves the purposes of pharmaceutical research, development and innovation in related areas of food industry, information technology and pharmaceutical industry. Beneficiary: University of Debrecen Consortium members are: The Chamber of Commerce and Industry of Hajdú-

<p>https://www.unideb.hu/en/article/innotop</p> <p>PHARMAPOLIS CLUSTER LTD</p> <p>http://www.pharmapolis-hungary.eu/news</p>	<p>Bihar County , INNOVA North-Great Plain Regional Innovation Agency</p> <p>Grant amount : HUF 582 858 009</p> <p>With its annual R&D income of about EUR 17 million, the University of Debrecen is one of the most rapidly developing knowledge centres in Central and Eastern Europe. With a research infrastructure of 17,000 m² in its new Life Sciences Building, the University of Debrecen provides world-class services and operates an extremely successful biotechnology incubation unit. The University is a superb environment for cooperation between researchers, companies and investors and plays an active role in the operation of the Pharmapolis cluster, as well as in local clusters focusing on functional food development, IT and life sciences.</p> <p>- Pharmapolis Debrecen</p> <p>is a greenfield investment on an area of almost 8,000 sqm to attract pharmaceutical SMEs to the neighbourhood. As an Innovative Pharmaceutical Cluster puts a great emphasis on the development of new, innovative products as well as getting around the results of R+D+I activities. Aims of the Pharmapolis Cluster: to strengthen the pharmaceutical innovative chain in Hungary; to establish and operate internationally competitive platforms and to develop the cluster of the particular branch. The Cluster created a networking process of propulsive industry of national importance based on the pharmaceutical-biotechnological innovative axis - connecting Szeged and Debrecen. This way the Cluster uniquely combines the industry-developing efforts of universities, city councils, chambers, innovative university spin-off and start-up enterprises and middle and large enterprises of considerable means.</p> <p>- COMPLEX INNOVATION - Health industry network for efficiency improvement TÁMOP-4.2.6-15/1</p> <p>The basic and general objective of the project is to adapt the healthcare/health industry principles of the EU to Hungarian circumstances, followed by their realization in practice in consideration of the characteristics of Hungary: - the more extensive participation of the health science research group of the University of Debrecen in RDI networks and facilitating its participation in multicenter clinical trials, - in connection with this, the realization of the necessary organizational and capacity development, preparations for RDI projects. - the development of the knowledge transfer and knowledge management capacities of the institution. - the preparation of the health science and health industry RDI related units of the university for participation in the HORIZON 2020 programs. - preparation for basic research projects in the field of healthcare and health industry. - networking in the field of RDI activities in healthcare and health industry.</p> <p>The duration of the project: March 1, 2015 – November 30, 2015</p> <p>Actual total costs: 289.912.002 (HUF)</p> <p>http://komplexinnovacio.unideb.hu/</p>
<p>UNIVERSITY OF PÉCS</p>	<p>The UNIVERSITY OF PÉCS (PTE) is the first University in Hungary. The roots</p>

<p>https://pte.hu/english/our_university</p>	<p>of the institution date back as early as 1367.</p>
<p>Faculty of Health Sciences</p>	<p>With the acceptance of the R+D+I Strategy the University of Pécs declared its commitment towards being a research university and towards innovation.</p>
<p>http://etk.pte.hu/for_international_students/general_informations</p>	<p>János Szentágothai Research Centre of the PTE aims are</p>
<p>Medical School</p>	<ul style="list-style-type: none"> - to concentrate the research power of the South-Transdanubian Region on health and environmental industry
<p>http://aok.pte.hu/en</p>	<ul style="list-style-type: none"> - to serve explorative and innovative research potentials by establishing a critical researcher mass with well-equipped new laboratories of the highest standard
<p>Faculty of Business and Economics</p>	<ul style="list-style-type: none"> - to have strong and tight cooperation between academic researchers and industrial partners, as well as to provide an optimal background for knowledge transfer
<p>Faculty of Engineering and Information Technology</p>	<ul style="list-style-type: none"> - to reflect quickly and flexibly to the modern research trends and to the needs of knowledge-based economy
<p>https://english.mik.pte.hu/</p>	<ul style="list-style-type: none"> - to provide external services supporting the innovative projects (eg. patent research and management, legal advice).
<p>All faculties:</p>	<p>Technology Transfer Office (TTO)</p>
<p>https://pte.hu/english/faculties</p>	<p>The aim of establishing TTO was the utilization of research products and technology transfer is to create an environment that provides for an optimal flow of knowledge for the local knowledge bases and innovative entrepreneurs.</p>
<p>Technology Transfer Office (TTO)</p>	<p>The PTE Faculty of Health Sciences is a leader both in health sciences, and also in sport science developments in Hungary. The Faculty runs educational and RDI programs in nursing, physiotherapy, midwifery and dietetics. All quite important for home care as well.</p>
<p>https://pte.hu/english/technology_transfer_office</p>	<p>The Faculty of Business and Economics has institutes for business administration, business methodologies and economic and regional sciences, and it has a Business and Economic Development Center.</p>
<p>Department: Department of Economics and Regional Studies</p>	<p>The 'Faculty of Business and Economics' and 'MTA-PTE Innovation and Economic Growth Research Group' made the first step of a larger research work and summarizes the legislative factors influencing entrepreneurial turn, primarily spin-off formation based on the domestic and international literature. It devotes special attention to the Hungarian regulation.</p>
<p>MTA-PTE Innovation and Economic Growth Research Group</p>	<p>MTA-PTE Innovation and Economic Growth Research Group</p>
<p>https://pte.hu/english/english/research_groups/research_groups_of_the_faculty_of_business_and_economic_s</p>	<p>The research group focuses on one of the highly critical yet least understood areas of the Hungarian innovation system that is innovation co-operations and entrepreneurship. The traditional tools provide insufficient ground for a deeper understanding of these areas, and they do not support the investigation of the relationship between innovation and economic growth either. The research carried out by the group analyses the complex system of relationships between innovation co-operations, entrepreneurship and economic growth on the basis of the latest methodological tools developed in the international literature that</p>

	<p>include – among others – agent-based simulation, Global Entrepreneurship and Development Index (GEDI) and Geographic Macro and Regional (GMR) modelling. This variety of approaches ensures more thorough understanding of the topic that enables sensitivity testing of economic growth against tools of innovation policy and development of scenarios for economic policy.</p>
<p>UNIVERSITY OF SZEGED</p> <p>Faculty of Health Sciences and Social Studies http://www.etszk.u-szeged.hu/english/</p> <p>Faculty of Medicine http://www.med.u-szeged.hu/english</p> <p>Department of Pharmaceutical Technology http://www.pharm.u-szeged.hu/phtech/information/history-of-the?objectParentFolderId=18853</p> <p>Faculty of Science and Informatics http://www.sci.u-szeged.hu/english http://www.included.hu/en/about http://www.included.hu/en/future</p> <p>Knowledge Management Research Center http://www.kmcenter.szte.hu/kmcenter-angol</p> <p>Institute of Informatics</p>	<p>The mission and purpose of the University of Szeged is to cultivate science and internationally competitive research work and to advance its research university nature. Its research and creative work that is realized as part of national and international research programmes comprises basic and applied research, creative arts, product and service development.</p> <p>It has a Knowledge Management Center which was founded to create value and broaden the scientific theories in knowledge management at University of Szeged. The Center is engaged in research topics which are important for assisting knowledge transfer as well (e.g. Science-to-Business (S2B) Marketing or Spin-off formation). http://www.kmcenter.szte.hu/en/research-group</p> <p>I has an INCLUDED TELEMEDICINE CENTER. It is a development center at the University of Szeged that builds on telemedical tools and turns medical / IT / economic expertise into specific products and, eventually, into money – in the form of startup companies. http://www.included.hu/en/about</p> <p>- Support scheme: SROP (TÁMOP- 4.2.1.C-14/1/)</p> <p>"Science Park" Provide support for knowledge transfer activities with the involvement of higher education institutions in zones of growth. The project aims to strengthen the economic and social positions of the University based on the quadruple helix model to initiate a knowledge transfer practice in the Hódmezővásárhely-Szeged priority growth zone.</p> <p>The Hódmezővásárhely-Szeged priority growth zone is based on the quadruple helix model, where the University of Szeged plays a key economic and management role in establishing a knowledge transfer network focusing on strategic objectives of the identified priority industrial fields, identifying measures, knowledge transfer services, provide assistance to project-development, monitoring evaluation schemes.</p> <p>Grant amount of 565 986 410.- HUF</p> <p><input checked="" type="checkbox"/> http://www.u-szeged.hu/tamop421c-0013/beszamolo/projektzaro-rendezveny</p> <p><input checked="" type="checkbox"/> http://www.u-szeged.hu/tamop421c-0013-index</p> <p>- Homokháti Rural Living Laboratory</p> <p>A new EU concept to boost R&D and innovation in Europe, living labs are human-centric and aim to develop new ICT-based services and products. The</p>

<p>http://www.inf.u-szeged.hu/en</p> <p>Department of Software Engineering http://www.inf.u-szeged.hu/en/sed</p>	<p>Department of Software Engineering, University of Szeged, established the Homokháti Rural Living Laboratory to assist residents in the region with ICT-based technologies. Combining the mobile ECG system of Meditech Kft. with Nokia's Bluetooth enabled PDA, the LAB is developing an integrated system supported by communications technologies to offer a personalized monitoring system for home care, monitoring and prevention, mainly for the elderly living on scattered farms. The LAB works closely with General Electric, and two other Hungarian medical equipment development companies, as well as with a mobile service provider, to improve and develop new technologies for mobile home care by integrating various technologies and equipment.</p>
<p>Semmelweis University, Budapest</p> <p>http://semmelweis.hu/english/the-university/rectors-welcome/</p> <p><u>The University has 5 faculties:</u></p> <p>Faculty of Dentistry; http://semmelweis.hu/english/faculties/dentistry/</p> <p>Faculty of Health and Public Services; http://semmelweis.hu/english/faculties/health-and-public-services/</p> <p>Faculty of Health Sciences; http://semmelweis.hu/english/faculties/faculty-of-health-sciences/</p> <p>Faculty of Medicine; http://semmelweis.hu/english/faculties/medicine/</p> <p>Faculty of Pharmacy; http://semmelweis.hu/english/faculties/pharmacy/</p>	<p>At Semmelweis University, research, development, and innovation (R&D&I) take place in the areas of living natural sciences, and social sciences. The scientific areas connected to the Ph.D. programme are basic, clinical, molecular, and multidisciplinary medicine, pharmaceutical sciences, mental health sciences, and pathological sciences. Social science research is employed in the areas of mental health and sport science.</p> <p>Faculty of Health Sciences researches:</p> <ul style="list-style-type: none"> • Characteristic of standing balance, assessment and therapeutic possibilities in physiotherapy. Fall and hip fracture prevention in geriatrics: The research aims to explore the biomechanical characteristics of standing balance. Development of an instrumental and testing protocol. Development of an evidence-based fall and hip fracture prevention program and verification of the results with biomechanical methods. • The role of physical activity in prevention of age-related diseases and functional deterioration and maintaining of independency: As the population ages, the number of individuals with disability and dependence is expected to increase. It is well documented that the independence in everyday activities is influenced by static and dynamic stability, lower limbs' muscle strength, walking ability and aerobic endurance. Hence, it is particularly important for an older person to participate on a regular basis in a physical activity program improving above mentioned functional abilities. The research aim is to investigate whether different types of moderate intensity physical activity programs could be feasible exercise forms for Hungarian community-living older adults. • Toward active old age: Aging and care for the elderly has become increasingly challenging in patient care. Both economic and as well as financial reasons play a role in helping to provide effective and appropriate care in nursing practice. The research aims to determine how to bring about a change in the quality of life in patients over 65 years of age with chronic disease who have been discharged following hospital treatment in Hungary and other countries of Europe. It is also important to determine what nursing methods and techniques can be used to prepare them and their families/relatives for them to pursue a more independent lifestyle, and to maintain or improve the patient's quality of life. <p>Faculty of Pharmacy researches:</p> <p>The Faculty of Pharmacy has been a research-oriented unit of higher education ever since its foundation. Drug development and innovation traditionally takes place in collaboration with industrial partners. New types of drug formulations, such as gastro-retentive tablets of enhanced bioavailability, bone implants, and others have recently been elaborated and patented with assistance from</p>

	advancements in nanotechnology.
<p>Eszterházy Károly University</p> <p>https://uni-eszterhazy.hu/en/ekf-college/eku/past-and-present</p>	<p>Eszterházy Károly University serves its students with a wide variety of educational programmes at four campuses located in four cities of the region. In addition to the traditional fields of arts, sciences and humanities, such as pedagogy, natural sciences, creative arts and humanities, the university provide undergraduate and graduate programmes and trainings in fields that meet new demands for expertise, while also creating pathways to individual success and fulfilment.</p>
<p>Healthcare Technologies Knowledge Centre of the Budapest University of Technology and Economics (BME)</p> <p>http://emt.bme.hu/emt/en</p>	<p>The Healthcare Technologies (at its foundation: Biomedical Engineering) Knowledge Centre of the Budapest University of Technology and Economics (BME EMT) was established on 1 July 2007 by the decision of the Senate of the University. Its founders are:</p> <p>Faculty of Electrical Engineering and Informatics, BME (as gestor), Co-operative Research Center for Biomechanics, BME, Faculty of Chemical Engineering and Bioengineering, BME, Faculty of Economic and Social Sciences, BME.</p> <p>Members of the EMT can be independent organisations or their organisational units, such as faculties, departments, research centres and independent research groups of BME, the research groups at BME of the Hungarian Academy of Sciences, other educational institutes and research units or their organisational units, other public institutions, enterprises, financial organisations, non-profit organisations.</p> <p>BME EMT cooperates with Semmelweis University of Medical Sciences in the area of biomedical engineering and health/biomedical informatics education. The tasks of BME EMT also include strengthening cooperation between academia and industry in order to further the utilisation of research results, the joint participation of R&D&I projects etc.</p>
<p>Institute for Nuclear Research, Hungarian Academy of Sciences (Debrecen)</p> <p>http://www.atomki.mta.hu/en/</p>	<p>The mission of Atomki is to perform fundamental research in experimental and theoretical atomic, nuclear and particle physics, and to apply the physical methods and knowledge in other fields of science like materials research, environmental and earth sciences, biological and medical research etc. Strong emphasis is laid on the development of techniques and instruments for fundamental and applied research, and on solving practical problems for industry, agriculture and medicine. The Institute is strongly involved in undergraduate and graduate physics education.</p> <p>The Department of Environmental Physics is run jointly by the Institute and by the University of Debrecen. The activity of the researchers of Atomki is rapidly increasing in knowledge and technology transfer. The Institute is hosting a European Research Council (ERC) Starting Grant in the field of nuclear astrophysics.</p>
<p>Hungarian Academy of Sciences Wigner Research Centre for</p>	<p>TECHNOLOGY TRANSFER OFFICE</p> <p>ESA (European Space Agency) technology transfer network works Europe-wide on facilitating the transfer of innovations, systems and know-how from the space</p>

<p>Physics http://wigner.mta.hu/en</p>	<p>industry to non-space areas, thus also to benefit everyday life</p> <p>The Technology Transfer Offices of ESA use a network of technology brokers to assess market needs for potential exploitation of space technologies. Technology transfer is operated through National Technology Transfer Offices which also support technology transfer initiatives.</p> <p>Local experts of technology transfer are part of the Europe-wide network of technology brokers. The technology transfer brokers are responsible for the effective execution of the programme promoting and launching national projects. The main elements of the international Technology Transfer Programme of ESA are:</p> <ul style="list-style-type: none"> space inventions covered by patents available for industry use, broker network in 16 European countries (including Hungary): transfer and use of space technology information, special materials, expertise and services in non-space industries, supporting start-ups, enabling investment support. <p>The technology transfer network in Hungary are composed of experts whose knowledge and extensive connection facilitate international information exchange; and pursue new developments where there is a potential for commercial exploitation of cutting edge space technologies. Connecting Hungary to this top European organisation, you can benefit from broker network's activities.</p> <p>The goal of this co-operation is to enable our experts to identify and support (even through funding) initiatives and early phase projects in the field of space technology aiming to develop new products or services.</p> <p>Our network encourages Hungarian entrepreneurs to launch business abroad. Also, our objectives are to contribute to the economic development of our country, to strengthen business, create jobs, and help to launch new ventures.</p> <p>The National Technology Transfer Point is in the Wigner Research Centre of Physics of the Hungarian Academy of Sciences.</p>
<p>Eötvös Loránd University, Budapest https://www.elte.hu/en/</p> <p>https://www.elte.hu/en/innovation/projects/on-going/progress-tt</p>	<p>Eötvös Loránd University's (ELU) Center for Innovation successfully applied for the mentoring and capacity building services of PROGRESS-TT consortia. The Center for Innovation was selected for intensive one-on-one capacity building support with cohort of 15 Technology Transfer Offices (TTOs) selected.</p> <p>The H2020-consortium, PROGRESS-TT (Public Research Organisation GRowing Europe through best practice SolutionS for Technology Transfer) will transfer the expertise of Europe's leading PROs to the TTOs with the greatest potential to grow. This includes intensive coaching and mentoring for high potential Public Research Organisations to accelerate their technology transfer (TT) activity in order to develop capability, capacity, opportunity, and to build a supportive TT environment.</p>

	<p>The PROGRESS-TT matched a TT expert in the person of Jon Wulff Peterssen for the Center for Innovation during the 6-month long cooperation. The collaboration having started in January 2017.</p>
<p>Bay Zoltán http://www.bayzoltan.hu/page/bay-description http://www.bayzoltan.hu/bay-tmk/international-references</p>	<p>The aim of Hungary's largest and most successful state-owned institution of applied research, Bay Zoltán Nonprofit Ltd., which is named after the famous physicist, is to improve the competitiveness and efficiency of enterprises in Hungary through successful innovation and technology transfer, in close cooperation with domestic and leading foreign partner institutions.</p> <p>We offer complex scientific and technical solutions to achieve a more efficient and fruitful operation for our domestic and foreign client base - which means over 200 enterprises at the moment. In other words, we play the role of "bridge of innovation" for our partner institutes through the activities of applied research-development and technology transfer.</p> <p>In addition to our research activities, Bay Zoltán Nonprofit Ltd. has supported the institute's participation in EU and other international R&D&I programmes, coordinated the EURAXESS researcher mobility programme at national level as well as conducted the operation and professional management of the Brussels KFI HunOR Office with a countrywide mandate since 2012, under the supervision of the Ministry of Public Administration and Justice.</p> <p>The activities of Bay Zoltán Nonprofit Ltd. include the state-run incubation of small and medium enterprises as well. We lease offices and warehouses with low utility costs to start-up enterprises dealing with research and development.</p> <p>Innovation & Environment Regions of Europe Sharing Solutions Programme acronym SILVER ECONOMY Proposal full title New business possibilities and innovative service/product concepts based on the future needs of ageing population Duration (yy-mm-dd) 2011.07.01-2013.06.30 Link: http://www.interreg4c.eu/ Programme full name The Ambient Assisted Living Joint Programme -Call 2-2009</p>

	<p>Programme acronym</p> <p>PaeLife</p> <p>Proposal full title</p> <p>Personal Assistant to Enhance the Social Life of the Seniors</p> <p>Duration (yy-mm-dd)</p> <p>2012.01.01-2013.12.31</p> <p>Link:</p> <p>n.a.</p>
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<p>BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS</p> <p>https://www.bme.hu/tech-transfer-office?language=en</p>	
<p>Óbudai Egyetem</p> <p>http://uni-obuda.hu/en/university</p>	

4.4. Public institutions / government helix

Main public actors (policy decision makers including Managing Authority of OP, health insurance companies, health and social care regulators) in Home Care R&I	
Name + website	Description of activities relevant for Home Care R&I
<p>Nemzetgazdasági Minisztérium (NGM)</p> <p>http://www.kormany.hu/en/ministry-of-national-development</p>	<p>Ministry for National Economy of Hungary (NGM)</p> <p>The Managing Authorities (MA) for EDIOP (GINOP), TSDOP (TOP) and CCHOP (VEKOP) are in the Ministry for National Economy of Hungary. EDIOP's MA is the Deputy State Secretariat of Economic Development Programmes, while the MAs of TSDOP and CCHOP are in the Deputy State Secretariat of Regional Development Programmes.</p> <p>The intermediate bodies (IB) of EDIOP and CCHOP are in the state secretariats where the MAs are.</p>

<p>Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal</p> <p>http://nkfih.gov.hu/the-office</p>	<p>National Research, Development and Innovation Office (NRDI Office)</p> <p>The Office is responsible for defining the policy, the implementation and the professional content of the 2nd funding priority axis of EDIOP (and the mirror calls in HHCOP). NRDI Office is not only responsible for preparing the annual or multiannual work plans (and calls) in the priority axis, but it is the professional evaluating body of the submitted applications for RDI grants as well.</p> <p>NRDI Office is the MA for the National Research, Development and Innovation Fund.</p>
<p>Magyar Fejlesztési Bank</p> <p>https://www.mfb.hu/</p>	<p>Hungarian Development Bank (MFB)</p> <p>A specific actor - the Hungarian Development Bank - is involved in the implementation of the 8th funding priority axis (of EDIOP) as financial intermediate body for the Financial Instruments.</p>
<p>Magyar Államkincstár</p> <p>http://www.allamkincstar.gov.hu/en/</p>	<p>Hungarian State Treasury (MÁK)</p> <p>MÁK is the IB of TSDOP.</p> <p>Main areas of work undertaken by the Hungarian State Treasury (hereinafter, Treasury) include:</p> <ul style="list-style-type: none"> - Execution and control of the central budget; - Financial services; - Management of funds allocated by applications, debt management; - Registration of budgetary institutions; - Management of the central payroll calculation; - independent financial control of the local authorities.
<p>Emberi Erőforrások Minisztériuma,</p> <p>egészségügyért felelős államtitkár</p> <p>http://www.kormany.hu/en/ministry-of-human-resources</p>	<p>Ministry of Human Resources - Minister of State for Healthcare, Ministry of Human Resources</p> <p>The minister of state as state secretary is responsible for assisting all the general duties of the minister responsible for health (now: Minister of Human Resources). The minister of state is also responsible for defining the policy, the implementation and the professional content of HRDOP, HHCOP and TSDOP as far as health is concerned. The minister of state is not only responsible for preparing the annual or multiannual work plans (and calls) in these OPs, but it is the professional evaluating body of the submitted applications for grants in health sector as well.</p>
<p>Emberi Erőforrások Minisztériuma,</p> <p>család- és ifjúságügyért felelős államtitkár</p> <p>http://www.kormany.hu/</p>	<p>Ministry of Human Resources - Minister of State for Family and Youth Affairs, Ministry of Human Resources</p> <p>The minister of state as state secretary is responsible for assisting all the general duties of the minister responsible for family and youth affairs (now: Minister of Human Resources). The minister of state is</p>

<p>en/ministry-of-human-resources</p>	<p>also responsible for defining the policy, the implementation and the professional content of HRDOP, HHCOP and TSDOP as far as family and youth affairs are concerned. The minister of state is not only responsible for preparing the annual or multiannual work plans (and calls) in these OPs, but it is the professional evaluating body of the submitted applications for grants in family and youth affairs as well.</p>
<p>Emberi Erőforrások Minisztériuma, szociális ügyekért és társadalmi felzárkózásért felelős államtitkár http://www.kormany.hu/en/ministry-of-human-resources</p>	<p>Ministry of Human Resources - Minister of State for Social Affairs and Inclusion, Ministry of Human Resources The minister of state as state secretary is responsible for assisting all the general duties of the minister responsible for social affairs and inclusion (now: Minister of Human Resources). The minister of state is also responsible for defining the policy, the implementation and the professional content of HRDOP, HHCOP and TSDOP as far as social affairs and inclusion are concerned. The minister of state is not only responsible for preparing the annual or multiannual work plans (and calls) in these OPs, but it is the professional evaluating body of the submitted applications for grants in social affairs and inclusion as well.</p>
<p>Emberi Erőforrások Minisztériuma, európai uniós fejlesztéspolitikáért felelős államtitkár http://www.kormany.hu/en/ministry-of-human-resources</p>	<p>Ministry of Human Resources - Minister of State for European Union Development Policy MA and IB for Human Resources Development Operational Programme (HRDOP)</p>
<p>Nemzeti Egészségbiztosítási Alapkezelő (NEAK) http://www.neak.gov.hu</p>	<p>National Health Insurance Fund Administration (NEAK) NEAK carries out the tasks relating to the management of the National Health Insurance Fund, the maintenance of records, keeping financial accounts and fulfilling the reporting obligation. The core activity of NEAK includes:</p> <ul style="list-style-type: none"> - functions relating to the management of the Health Insurance Fund, including funding and reimbursement accounting, the maintenance of records, keeping financial accounts and fulfilling reporting obligations, - carries out procedures relating to the social security assistance of pharmaceuticals and medical aids and the adoption of health technologies. These technologies may be: <ul style="list-style-type: none"> o new medical procedures without new equipment o new medical procedures with new equipment o approved equipment in a new medical procedure. <p>Healthcare services funded by the National Health Insurance Fund:</p>

	<p>Benefits in kind and cash benefits are provided by NEAK to the insured persons. Benefits in kind includes cost-free healthcare services such as preventive examinations, primary healthcare, specialised inpatient care, specialised outpatient care, home care and hospice, certain dental care, rehabilitation, the ambulance service, patient transport and accident-related benefits, drug reimbursement, reimbursement for medical aids, medical spa services, reimbursement of travel expenses and benefits granted on grounds of equity.</p>
<p>Országos Gyógyszerészeti és Élelmezés-egészségügyi Intézet (OGYÉI) www.ogyei.gov.hu</p>	<p>National Institute of Pharmacy and Nutrition (OGYÉI)</p> <p>OGYÉI examines the notifications on the quality of medicinal products and adverse drug reaction alongside to the tasks pertaining to the authorization of medicinal products and ensuring withdrawal from the market of the defective batches posing a threat to human health. Additionally it is also OGYÉI's task to authorize the manufacture, distribution of medicinal products and the activity of parallel import according to strict considerations and to continuously control good manufacturing- . distribution-, clinical- as well as laboratory practice concerning the development of medicinal products, and also the pharmacovigilance related activity of the marketing authorization holders. The obligation of authorizing and supervising clinical trials on investigational medicinal products, off-label indication, individual demand for medicinal product and dispensing of medicinal products are also under the competence of OGYÉI. Activities relating to gene technology and establishments carrying out such experiments in the field of human medical sector are authorized by OGYÉI, as well.</p>
<p>Egészségügyi Szakmai Kollégium https://kollegium.aEEK.hu/</p>	<p>Health Professional Collegium (College)</p> <p>The College – through its faculties specialized in various disciplines of medicine, management, economy and technology – develop proposals for the minister responsible for health.</p> <p>These proposals concern professional standards, protocols and guidelines in operating healthcare, performing treatment, cure and care services. The College has been setup in National Health Service Centre (ÁEEK).</p> <p>The professional foundations of Hungarian healthcare are guaranteed by the application of professional guidelines and adjacent local protocols (rules of procedure) based on evidence-based medicine and on the consensus of the different professions (multidisciplinarity). The sectorial neutrality of professional rules and of the licensing of operators promote that patients be provided with high-standard healthcare both within the publically and the privately financed healthcare system. From March 2013, there are laws specifying the protocols for establishing healthcare guidelines. In the course of developing new professional healthcare guidelines, the Collegium is paying attention – besides the above – to make sure that the new guidelines contain the indicators to be applied in the case of administrative inquests, professional quality assessments, and that they reflect the standpoints of patients, patient organizations, family practitioners and other interested parties.</p>

Most significant research projects / research cooperation initiatives in Home Care R&I

Significant R&I projects / research cooperation initiatives in Home Care realized in Hungary during 2007-2016		
Project name + description	Participating members / organizations	Results of the activities
<p>SROP-5.4.3</p> <p>The general aim of the construction is to improve quality of life of the direct and indirect target groups. Training of people who receive care allowance, theoretical and technical training of assistant nurses, continuation of their employment in home care and domestic care assistance services. We wish to improve the quality and technical level of care giving by purchasing IT and ICT products.</p> <p>(Implementation: .01. 06.2011-.31.07,2012)</p> <p>We entered contract with the Budapest (capital city) branch of the Hungarian Red Cross who provided the training for assistant nurses.</p>	<p>local governments, associations, social workers, (country +Central Hungary (KMR))</p> <p>(in cooperation with the Red Cross and other organizations in the training)</p>	<p>Assistance nurse training for people receiving care allowance, followed by organizing part time employment in home care/ domestic care assistance services. in order to achieving results provides social mentoring activities,</p>
<p>"Guruló" (rolling) project www.gurulo.hu</p> <p>One of the main goals is to establish a national service that adapts assistive technology to the individual needs of users. This means the individual setup of the best suitable assistive equipment that requires the least energy from its user. The main goal was to enhance the social and labour market integration of people with physical disabilities through the establishment of a national network of regional workshops aimed at the development of assistive technology and special sports equipment. The total budget of the project is EUR 5.000.000.</p> <p>TÁMOP-1.4.2-07/1 "Mozgáskorlátozott emberek foglalkoztatását, önálló életvitelét segítő eszközfajlesztő műhely és szolgáltatási hálózat"</p> <p>(Service Network and Workshop for developing equipment assisting employment and independent living of people with reduced mobility)</p>	<p>The Rehabilitation Centre of People with Physical Disabilities (in Hungarian: Mozgássérült Emberek Rehabilitációs Központja, MEREK, www.merek.hu) is a national organisation active in the complex rehabilitation of people with physical disabilities, among them people with severe physical and multiple disabilities.</p> <p>Implementation : 2008-2014</p>	<p>Main Achievements:</p> <ul style="list-style-type: none"> - Use of a pressure mapping device introduced into evaluation practice. - Maintenance and personal adaptation of assistive tools started at social institutions and on a private basis. - and: <p>http://gurulo.hu/sites/default/files/dokumentum/gurulo_english_summary.pdf</p>
<p>SIOP-3.3.2-12/1 Development of social services with support of the assistive technology products on the field of home care</p> <p>The aim of the project is to create a national logistical network which allows to provide a state of art of the rental system of the assistive technology products, according to international standards supporting technologies, for people receiving home care. The service background of the project will be provided by 6 logistical units, which will be set up the in convergence regions of Hungary.</p> <p>From July 2013 the project started with a budget of HUF 1 billion. The aim of the project is to develop</p>	<p>The Rehabilitation Centre of People with Physical Disabilities (in Hungarian: Mozgássérült Emberek Rehabilitációs Központja, MEREK</p> <p>Implementation : 2008-2014</p>	<p>The target group of the project are especially the approx.13-15 000 people who go through some forms of a hip operation, along with another 3-4 thousand people who use electric wheelchairs and another 8-10 thousand severely disabled people living with multiple disabilities their family members and their caretakers. The newly established care giving system pays special</p>

<p>services which allow to insure the home care supporting assistive technology products (electrical beds, hygiene instruments, ceiling hoists, mobile lifters, other products which helps the home accessibility) in the frame of a rental system for claimers</p>		<p>attention to the children within the target group, as there are only a limited number of assistive technology products available for them- even in European relations- The services are not custom made enough to take special regard to children's development provide age-appropriate services for them.</p>
<p>Hungarian Charity Service of the Order of Malta (MMSz) assumed to find an innovative solution with developing WEBNOVER.HU (WebNurse) to support informal helpers (meeting needs for easily available, simple training material, including audio-visual elements regarding simple care tasks). WebNurse has been implemented in the frames of HELPS project. The aim of WebNurse-development was to provide informal helpers with information through the training material available at a website, which can be used during their daily care and nursing activities. When designing the Hungarian WebNover.hu site, the Hungarian Charity Service of the Order of Malta attempted to collect all the information and support that informal helpers might need during their everyday work. As most of them were not professional caregivers, the accomplishment of apparently simple care activities may be difficult for them. The 45 short tutorial videos offer them helped to learn and carry out safely the basic home care tasks.</p> <p>WebNurse has provided information and practical advice in six areas: nursing tasks, available services, mental support, nutrition advice, general care issues and legal advice. Access is free to ensure its rapid spread.</p>	<p>Hungarian partners in HELPS: Municipality of the City of Debrecen (Eszak-Alfold, HU), Hungarian Maltese Charity Service (Kozep-Magyarország, HU),</p> <p>Financed by EU Central Europe programme.</p> <p>Implementation: 2011-2014</p> <p>Lead partner: Friuli Venezia Giulia Autonomous Region - Central Directorate for health, social health integration and social policies (Friuli-Venezia-Giulia, IT)</p> <p>http://www.central2013.eu/nc/projects-2007-2013/approved-projects/funded-projects/?tx_fundedprojects_pi1[project]=113</p>	<p>Short-term home nursing (14 days in Hungary) is financed by the Health Insurance Fund but there is no long-term home nursing service. Families do not have the nursing/care skills and knowledge necessary to carry out care/nursing tasks. Responding to these challenges, the Hungarian Maltese Charity Service (MMSZ) created a web-based programme titled WebNurse (WebNővér) in the framework of the HELPS project of the Central European Research Programme of the European Union.</p> <p>WebNurse (webnover.hu) has been ready and in operation since early 2014.</p>
<p>Skype Care I (Skype in Care for Older People), Model Program I. Years of the research: 2010 to 2011</p> <p>http://www.activeageingnetwork.eu/en/skype-care-i-skype-care-older-people-model-program-i</p> <p>Skype Care II (Skype in Care for Older People), Model Program II. Years of the research: 2012 to 2014</p> <p>http://www.activeageingnetwork.eu/en/skype-care-ii-skype-care-older-people-model-program-ii</p> <p>The Hungarian model programme designed to test the hypothesis that internet-illiterate old people receiving long-term care at home would cease to feel lonely if they could learn to use Skype. Target group:</p> <p>Lonely digitally illiterate home care recipients over 75 years old, with limited outdoor mobility.</p> <p>The 1st research resulted in a wide range of positive impacts on micro, meso and macro levels. The relationships affected different actors on micro level: older persons; young volunteers; family members; family carers; interpersonal contacts of older people.</p>	<p>Financed by:</p> <p>Hungarian Maltese Charity Service (MMSz)</p> <p>Researcher / Author:</p> <p>Dr. PhD Zsuzsa Széman</p> <p>Local centres of MMSz took part in the programme actively.</p> <p>Local municipalities were also involved.</p>	<p>Skype Care I proved that the elderly came into contact with all generations in society, resulting in a strong network of intensive intergenerational and intragenerational relationships.</p> <p>Skype Care II proved that the elderly could learn to use Skype with the help of young volunteers even in a small town and backward region.</p>

These actors continuously interacted.		
<p>ICT and Old Age Programme (Ministry for National Development (NFM)</p> <p>Government Decree 1056/2017. (II. 7.): The 2nd phase of the programme –as a continuation of the ICT and Old Age model programme implements the extension of the programme to disadvantageous regions</p> <p>A program covers 63 settlement centres and enables 5000 self-supported people aged 65+ to use a PC or laptop in their homes and another 5000 people can join the programme with their own PC-s.</p> <p>For the elderly in need the necessary IT equipment, internet access and the 1500 signal-alarm monitoring wrist watches for health detection are provided by the Ministry of National Development and the Governmental Information-Technology Development Agency</p>	<p>The minister for national development implements the programme via the Governmental Information-Technology Development Agency in the selected disadvantageous settlements until August 31st 2018. (Following that the possibility of the programme's nationwide extension has to be examined.</p>	<p>Helping Hand ICT model programme was launched 1st March, 2015, with the aim to assist elderly people, who live on their own, in preserving and strengthening their societal relationships by applying 21.st century IT tools, which enable them to develop their everyday routine activities including monitoring their health condition regularly that will improve efficiency of the operation of the healthcare system.</p> <p>The up-to- date tools won't replace but will provide more human care and attention. Via the everyday usage of Smart phones, Skype and monitoring-alarm smart watches, the everyday communication with the care takers, the workers in the dispatcher centre and with the students who teach how to use the IC devices, elderly people's human relationships will be vitalized and strengthened.</p>

5. Regional strategies / analyses / studies carried out in or relevant for Home Care

This section provides references to strategies, analyses and studies carried out that are relevant to Home Care segment.

Market analysis name	Short description of the aim of the analysis	Website link for more information / download
<p>Characteristics of Primary Care in Europe</p> <p>Az alapellátás jellemzői Európában '2014</p>	<p>Aim: Tracing trends and innovative solutions in primary care in Europe</p> <p>Findings: Home care gains important role in improving efficiency and effectiveness of primary care and the whole healthcare system.</p>	<p>https://era.aeek.hu/zip_doc/kutatas/2014/alapellatas_EU.pdf</p>
<p>Current structure and future challenges WHO – European Observatory on Health</p>	<p>Conclusions and proposals about the way forward are in Chapter 5, where you can read about i.a. 'System-tailored responses</p>	<p>http://www.euro.who.int/_data/assets/pdf_file/0008/18179/9/e96757.pdf</p>

<p>Systems and Policies (Observatory Studies Series No. 27 / 'Home Care across Europe' (2012) Book</p>	<p>to challenges'. Here challenges in home care, responses and their possible consequences are listed in Table 5.1.</p> <p>Findings listed in table 5.1 as far as 'Integration' is concerned :</p> <p>Challenge: Poor integration with nursing homes and hospitals ;</p> <p>Responses (examples of countries where applied or planned) :</p> <ul style="list-style-type: none"> • liaison nurses for hospital discharge (NL, ES) • case managers for clients with chronic conditions (BE, EN) • transmural networks or teams (FI, BE, NL) • common electronic client record systems (FI) <p>Consequences to be taken into account : Costs.</p> <p>You can also find Options for policy-makers (For national governments + For the European Commission) in chapter 5.5</p> <p>Among final conclusions (chapter 5.6) it is stated that "Home care is in demand, not only among citizens in Europe (who prefer to stay independent as long as possible), but also among decision-makers (who expect it to be a cheaper alternative to hospital-based and nursing home care)."</p>	
<p>The social/professional consultation of call EFOP-1.8.2-17</p> <p>Felhívások társadalmi egyeztetése 2014-2020 - EFOP-1.8.2-17</p>	<p>A forthcoming call in HRDOP for complex development of primary and public health systems) stressed the importance of home care.</p> <p>(Az alapellátás és népegészségügy rendszerének átfogó fejlesztése - alapellátás fejlesztése)</p>	<p>https://www.palyazat.gov.hu/partnersgi-egyeztetsi-folyamatok-2014-2020</p>
<p>National Smart Specialisation Strategy (S3) of Hungary (September 2013)</p> <p>Nemzeti Intelligens Szakosodási Stratégia (S3)</p>	<p>Important: 'Healthy Society and Wellbeing' is one of the sectorial priorities of the National S3 (strategy</p> <p>(Sectoral priority "Healthy society and wellbeing" : Understanding diseases, early diagnosis, advanced medical and instrumental therapies, clinical methods, pharmaceutical research and development,</p>	<p>http://www.nih.gov.hu/strategy/national-smart/national-smart-specialisation</p>

	innovative health industry and health tourism solutions	
Investment in the future National Research and Development and Innovation Strategy of Hungary (2013-2020 (November 2014)) Befektetés a jövőbe Nemzeti Kutatás-fejlesztési és Innovációs Stratégia (2013-2020)	The Strategy emphasizes that there are several research & development-intensive industries with comparative advantages in Hungary, in particular pharmaceutical manufacturing, the health industry in its broader sense, the IT sector, biotechnology, green technologies, and car manufacturing. With regard to the public sector innovations, a general objective has been set by the strategy: Invigoration of the innovation activities in the health care, environmental, energy, educational, transport/logistics sectors.	http://nkfih.gov.hu/policy-and-strategy/national-strategies/national-rdi-strategy/2013-2020
National Infocommunication Strategy (NIS) of Hungary Nemzeti Infokommunikációs Stratégia (NIS)	The pillars (Digital infrastructure, Digital competences, Digital economy and Digital state) + horizontal factors (E-inclusion, R+D+I and Security) of NIS put teleHealth, mHealth and eHealth are in the focus areas of NIS.	http://www.kormany.hu/download/5/ff/70000/NIS_EN_clear.pdf
„Healthy Hungary 2014-2020” health sectoral strategy of Hungary, Egészséges Magyarország 2014-2020” Egészségügyi Ágazati Stratégia ‘2014	Analysis of current state of art in health care and defining development priorities for 2014-2020 (workforce, management, prevention and primary care, ICT-eHealth) Ministry of Human Capacities (EMMI), 2014	www.kormany.hu/download/e/a4/30000/Egészséges Magyarország eü stratégia .pdf

6. Quadruple-helix cooperation in R&I

The “quadruple-helix cooperation in R&I” section provides more detailed review of existing quadruple-helix model research projects / cooperation initiatives in general health care (with a potential to transfer to a Home Care segment) as well as Home Care segments including the list and description of the most significant ones. The projects / cooperation initiatives cited for general health sector aim to provide comparison of quadruple-helix model based research and innovations usage in general health sector compared to sector of Home Care R&I usage only. The last part of this section reveals attitudes of the main actors in R&I from all 4 helixes (formal and informal health care providers, business & business supporting actors, research and public institutions) towards using quadruple-helix model based cooperation in R&I.

Quadruple-helix model based research projects / cooperation initiatives

in general health R&I (excluding Home Care R&I but with a potential for transfer into Home Care segment, both pure regional or international with regional implementation)

Science Park in the Hódmezővásárhely-Szeged priority growth zone	Initiative - Support scheme: TÁMOP- 4.2.1.C-14/1 "Science Park" (The Initiative - Support scheme was a call for projects that was available at Social Renewal Operational Programme – SROP - 2007-2013 &N+2, as the 2nd action of the 4th priority axis of the OP.)
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<p>Initiative + project aiming initiating, establishing and improving cooperation</p>	<p>Project: Strengthen the economic and social positions of University of Szeged based on the quadruple helix model to initiate a knowledge transfer practice in the Hódmezővásárhely-Szeged priority growth zone</p> <p>Implemented in: February-November 2015</p> <p>Grant amount of 565 986 410.- HUF</p> <p>Results: The Hódmezővásárhely-Szeged priority growth zone is based on the quadruple helix model, where the University of Szeged plays a key economic and management role in establishing a knowledge transfer network focusing on strategic objectives of the identified priority industrial fields, identifying measures, knowledge transfer services, provide assistance to project-development, monitoring evaluation schemes.</p> <p><input checked="" type="checkbox"/> http://www.u-szeged.hu/tamop421c-0013/beszamolo/projektzaro-rendezveny</p> <p><input checked="" type="checkbox"/> http://www.u-szeged.hu/tamop421c-0013-index</p>
<p>Establishment of “science park” in Debrecen</p> <p>Initiative + project aiming initiating, establishing and improving cooperation</p>	<p>Initiative - Support scheme: TÁMOP- 4.2.1.C-14/1 "Science Park" (The Initiative - Support scheme was a call for projects that was available at Social Renewal Operational Programme – SROP - 2007-2013 &N+2, as the 2nd action of the 4th priority axis of the OP.)</p> <p>Project : Establishment of “science park” in Debrecen in priority fields of pharmaceuticals, food industry, IT and electronics.</p> <p>Lead partner: University of Debrecen</p> <p>Consortium members: The Chamber of Commerce and Industry of Hajdú-Bihar County , INNOVA North-Great Plain Regional Innovation Agency</p> <p>Implemented in: March-October 2015</p> <p>Grant amount : HUF 582 858 009</p> <p>Results: Laying down conditions for creation of supplier-service chains based on the needs of business, research, public and end-users in order to be able to foster utilization of research findings by harmonising and effectively coordinating innovation activities.</p> <p><input checked="" type="checkbox"/> http://www.hbkik.hu/hu/hajdu-bihar-megyei-kereskedelmi-es-iparkamara/tamop-4-2-1-c-14-1-konv-2015-0004-tudas-park-12870</p>
<p>Support scheme: SROP (TÁMOP-4.2.6-15/1)</p> <p>Initiative</p>	<p>Call for proposals offered by SROP in 2015</p> <p>Title: Improvement of innovation environment of health sciences and industry, and development of professional and business networking</p> <p>This initiation aimed to strengthen R+D and innovation activities related to the field of health and healthcare industry and promote the development of professional networks, knowledge management and knowledge transfer in healthcare, by fostering cooperation among not- for-profit economic actors, higher education, academic bodies and civil organizations. The scheme gave support to disseminate the 3 entity (triple helix), and the 4 entity (quadruple helix)</p>

	<p>models and the elaboration of new R+D+I management and knowledge management systems, as well as further development of existing organizational and institutional solutions.</p> <p>Results: 6 application, 3 supported and implemented projects/partnerships (contract amount: HUF 999 541 414)</p>
<p>Knowledge network on health sciences and healthcare industry in the South Big Plain region with the aim to establish innovation environment for molecular medicine</p> <p>Project aiming initiating, establishing and improving cooperation</p>	<p>Lead partner: SZEGEDI TUDOMÁNYEGYETEM</p> <p>Consortium member: Biological Research Centre, Szeged -HAS</p> <p>Duration: 2015.04.15-2015.11.30</p> <p>Budget: 392 855 200.- HUF</p> <p>Support scheme: SROP (TÁMOP-4.2.6-15/1)</p> <p>The project aimed to widen the cooperation between the University of Szeged and the Biological Research Centre of the Hungarian Academy of Sciences, operating in Szeged. in the field of health sciences and healthcare industry by preparing new quality R+D projects, and by transferring new knowledge elements of molecular medicine into the corporate sector and towards the policy makers of the healthcare government. The project was a major step in preparing the HCEMM-MOLMEDEX cooperation.</p>
<p>Healthy Living- Developing Innovative Environment and Professional Network</p> <p>Project aiming initiating, establishing and improving cooperation</p>	<p>Lead partner: Eszterházy Károly University, Eger</p> <p>Consortium member: Semmelweis University</p> <p>Duration: 2015.04.15-2015.11.30</p> <p>Budget: 244 034 728 .- HUF</p> <p>Support scheme: SROP (TÁMOP-4.2.6-15/1)</p> <p>The project managed to achieve its aim is to develop the innovation environment for health science and healthcare and to promote professional networking, which were implemented in cooperation with the project partners with involving other stakeholders.</p> <p>The project has begun to improve cooperation of health service providers in R+D+I networks, assisted their participation in multi-focused clinical trials and implemented organisational and capacity development.</p> <p>http://p2015-4.palyazat.ektf.hu/</p>
<p>COMPLEX INNOVATION - Health industry network for efficiency improvement</p> <p>Project aiming initiating, establishing and improving cooperation</p>	<p>Lead partner: University of Debrecen</p> <p>Consortium members: MTA Atomki (Institute for Nuclear Research, Hungarian Academy of Sciences) and ÁEEK (National Health Service Center)</p> <p>Implemented in: March-November 2015</p> <p>Grant amount : HUF 362 651 486</p> <p>Support scheme: SROP (TÁMOP-4.2.6-15/1)</p>

	<p>The basic and general results of the project were to adapt the healthcare/health industry principles of the EU to Hungarian circumstances, followed by their realization in practice in consideration of the characteristics of Hungary: - the more extensive participation of the health science research group of the University of Debrecen in RDI networks and facilitating its participation in multicenter clinical trials, - in connection with this, the realization of the necessary organizational and capacity development, preparations for RDI projects. - the development of the knowledge transfer and knowledge management capacities of the institution. - the preparation of the health science and health industry RDI related units of the university for participation in the HORIZON 2020 programs. - preparation for basic research projects in the field of healthcare and health industry. - networking in the field of RDI activities in healthcare and health industry.</p> <p>The whole consortium managed to pave participation of its members in several international research and innovation partnerships for preparing project proposals and implementation of projects. All consortium members achieved to develop strategies/manuals for R&I networking in years 2016-2018. Since the project launch the 3 partners have managed to organize more than 30 infodays for business, research, public and end-user stakeholders to introduce their needs, ideas and results in innovation, and initiate and strengthen cooperation.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> http://komplexinnovacio.unideb.hu/ <input checked="" type="checkbox"/> http://www.atomki.hu/en/projects <input checked="" type="checkbox"/> AEEK_PI-kiadvanyok
<p>Regulated entrepreneurial university</p> <p>initiative + project aiming, initiating, establishing and improving cooperation</p>	<p>Research project : Regulated entrepreneurial university (Szabályozott vállalkozó egyetem)</p> <p>Implemented by : The 'Faculty of Business and Economics' and 'MTA-PTE Innovation and Economic Growth Research Group</p> <p>Besides the concept of the Triple-Helix unfolded during the second half of the 20th century, recently we are witnessing the spread of the Quadruple- and Quintuple-Helix concepts in the literature. While the role of universities in social/economic development and the forms of it are in the focus of investigations and lead to the articulation of newer theoretical concepts, the Hungarian evidences are mixed even related to the practical realisation of the Triple-Helix. Following the related enactments in 2004 and 2005 most of the institutions – largely owing to capacity barriers – primarily focussed on meeting the minimum criteria required by the legislation, whereas unique and successful elements were rather the exception. The effective response of universities was partly hindered by the mismatch of the national definitions („utilizing company” of the Innovation Act in 2004) with the international terminology, as it has been highlighted by many professional organizations and researches.</p> <p>Project results were summarised by the researchers in an article which was the first step of a larger research work and summarizes the legislative factors influencing entrepreneurial turn, primarily spin-off formation based on the domestic and international literature. It devotes special attention to the Hungarian regulation.</p> <p>http://www.inno.u-szeged.hu/download.php?docID=51964_page 200</p> <p>The article was redacted and issued in the monography delivered by the "Science Park" project of University of Szeged (TÁMOP-4.2.1.C).</p>

<p>HCEMM-MOLMEDEX</p> <p>Project aiming initiating, establishing and improving cooperation</p> <p><input checked="" type="checkbox"/> http://nkfih.gov.hu/the-office/press-releases/kick-off-two-winning</p>	<p>The project HCEMM-MOLMEDEX - Creating the Hungarian Centre of Excellence for Molecular Medicine aims to establish a centre of excellence in the field of molecular medicine with a strong focus on translational medicine, that is, the “translation” of laboratory research findings to everyday medical treatment as soon as possible.</p> <p>The project is one the ten winners in the “Teaming” action, the most prestigious one in the Widening pillar of the Horizon 2020 framework programme aiming to establish centres of excellence with the involvement of leading European institutions in countries whose RDI achievement is below the European top.</p> <p>Consortium members are: University of Szeged, the scientific coordinator of the project, University of Debrecen, Semmelweis University, the European Molecular Biology Laboratory (EMBL)</p> <p>The consortium would particularly focus on research directions promising a breakthrough in the curing of cardiovascular, tumour and inflammatory diseases especially affecting older generations. In addition, they find it particularly important to make the consortium a regional centre of scientific excellence training and employing highly qualified researchers and engaged in cutting-edge research in molecular medicine. The new Centre of Excellence will be implemented in three locations: Debrecen, Szeged and Budapest with the seat in the ELIPOLIS in Szeged. The project has a total budget of EUR 52 million, that is, approximately HUF 15.6 billion.</p>
<p>EPIC</p> <p><input checked="" type="checkbox"/> http://nkfih.gov.hu/the-office/press-releases/kick-off-two-winning</p>	<p>The project EPIC – Centre of Excellence in Production Informatics and Control aims to create a centre of excellence with the potential to achieve remarkable results in the fields of cyber-physical production systems.</p> <p>The project is one the ten winners in the “Teaming” action, the most prestigious one in the Widening pillar of the Horizon 2020 framework programme aiming to establish centres of excellence with the involvement of leading European institutions in countries whose RDI achievement is below the European top.</p> <p>The project is implemented by the consortium of the HAS Institute for Computer Science and Control, the Budapest University of Technology and Economics, and European Policy and Business Development at the Fraunhofer Institute</p> <p>Their joint intention is to speed up innovation, create new industrial solutions, develop a sustainable and competitive production ecosystem, and “train” a generation of young researchers full of initiative and experienced in the use of international best practices. They are also eager to propagate information technologies in manufacturing technology. In the framework of the EPIC project, at the initiative of the HAS Institute for Computer Science and Control, the National Industry 4.0 Technological Platform was established with the aim to adapt the “Industrie 4.0” (the fourth industrial revolution) trend in Hungary. The project has a total budget of EUR 21.7 million, that is, HUF 6.5 billion.</p>
<p>InnoStars</p>	<p>InnoStars is a unique concept, initiation and cooperation for widening participation and outreach across Europe. It has been establishing new ties for innovation and growth since 2015 by joining EIT Health network. The InnoStars consists of regional clusters of EIT Health Associate Partners representing industry, academia, and health providers, and makes bridge among them and other stakeholders of the Quadruple Helix.</p> <p>InnoStars runs programmes to establish and strengthen strong cooperation by</p>

	<p>promoting Campus, Innovation and Accelerator projects.</p> <p>EIT Health promotes entrepreneurship and innovates in healthy living and active ageing, providing Europe with new opportunities and resources. It enables citizens to lead healthier and more productive lives by delivering products, services and concepts that improve quality of life and contribute to the sustainability of healthcare across Europe.</p> <p>GE Healthcare Hungary and Semmelweis University (SE) representing the Central Hungary Region - are establishing partners of InnoStars.</p>
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Quadruple-helix model based research projects / cooperation initiatives in Home Care R&I

<p>Included Telemedicine Center</p> <p><input checked="" type="checkbox"/> http://www.u-szeged.hu/download.php?docID=51795</p> <p><input checked="" type="checkbox"/> http://www.included.hu/en/about</p> <p><i>initiative + project aiming initiating, establishing and improving cooperation</i></p>	<p>University of Szeged (SZTE) has recently established the Included Telemedicine Center by the Department of Software Engineering. The mission of the Center is to bring the best of Medical, Computer Science & IT and Mathematical & Economics research into Telemedicine development with an inter-disciplinary approach.</p> <p>The Center is proud of the development of platforms: the Included platform facilitates swift realization of telemedical and home care project ideas (on occasion, 90% time and resource savings can be achieved), and the FuturICT.hu platform makes possible collection and analysis of large amounts of (involving e.g. 10.000 patients) data and health information fully anonymously as a reply to various medical requests.</p> <p>University of Szeged leverages the presence of various clinics, and involves general practitioners and home care organizations into its R&D projects. Building on the results of Included-programme SZTE intends to involve representatives of end-users and partners from the business and public sectors in order to enlarge the existing innovation cooperation to quadruple helix one.</p>
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Attitude of main R&I actors from all 4 helixes towards using quadruple-helix model based R&I cooperation

A. citizens / users

<p>Attitude of actors from the citizens / users helix (formal + informal health care providers, elderly care recipients) towards using quadruple-helix R&I cooperation</p>	<p>Elderly, patients, families, other care recipients:</p> <ul style="list-style-type: none"> • want to be part of innovative projects / initiatives in area of home care and help shape finding solutions to needs of people working with and in general; • want to receive more information about the possibilities, goals and procedure of the innovation, such as complications resulting from taking part in trials; • are ready to participate in POST CLINICAL TRIAL LIVING LAB programmes and projects which threaten with less or no complications, but result easier to use solutions and products; <p>Employers:</p> <ul style="list-style-type: none"> • are interested in avoiding or shortening the time they lose because of illness of their employees (or the relatives of their employees) by prevention, quicker rehabilitation and shorter innovative healthcare solutions and procedures;
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	<p>Payers (social/public/non-profit or for-profit insurance organizations):</p> <ul style="list-style-type: none"> • are interested to get more effective (adequate) and more efficient (more value and/or less costs of adequate) solutions, procedure, protocols, products and services than those which they are paying for at the moment; • are looking new solutions to develop the output of the cash management; <p>Formal care and medical providers (staff):</p> <ul style="list-style-type: none"> • are looking for possibilities to get acquainted with new therapies and equipment; • seeking for jobs that are well paid; • would like to avoid overtime; • would like to travel less among their home, job/cabinet, patients and other places; <p>Formal care and medical providers (organizations):</p> <ul style="list-style-type: none"> • would like to solve their problems caused by lack of staff; • try to get financial resources for investments, procurement for general operation and be competitive in recruitment and running HR management; • are / should be interested in increasing efficiency and effectiveness of daily activities; • are lobbying for an update of the unit prices of their services paid by insurance system/organizations, and are interested in fast reception of innovative new and/or innovated (evidence based) drugs, solutions, equipment etc. by insurance system/organizations.; • are / should be interested in shortening “hotel” services (time per capita spent on inpatient care) by developing telecare, homecare and integrated care; • worry about launching pre-commercial procurement or public procurement of innovation, because: <ul style="list-style-type: none"> - they are afraid of investing (own resources and/or subsidy) in a programme that might not deliver the satisfactory solution to their unmet need; - they have no experiences in preparing and implementing public procurement procedure/procedures for PCP/PPI (with a special regard on the reactions of bidders and PP authority.
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B. businesses + business supporting actors

<p>Attitude of actors from the business helix (businesses + business supporting actors) towards using quadruple-helix R&I cooperation</p>	<p>Term “employer” in this context does not refer to business (businesses + business supporting actors in quadruple-helix R&I cooperation). Business is understood as undertaking in production and supply of products and services and put them on market. Innovation (incl. development and research as well) is a part of the activities done by those who undertake in doing business. The purpose of innovation is to maintain and increase competitiveness of sales and making profit on the market. How do they intend to achieve this aim?</p> <ul style="list-style-type: none"> - Most frequently business is concentrating on satisfying needs of the owners (return on investment), the management (profit) and staff (compensation). In order to succeed in satisfying these needs they also have to meet the needs of the members of the value chain their organization operates (vendors/suppliers + buyers/clients and end-users). In addition there are strong stakeholders with special needs in the ecosystem, such as public and general public. - Business organizations generally focus on 1 or 2 elements of the need-
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	<p>mix of their ecosystem, mainly on the needs of the direct buyer and the management, therefore they seldom manage to establish or join quadruple helix teamwork (QHT).</p> <ul style="list-style-type: none"> - Most business organizations forget about outlining the whole stakeholder-consumption-chain (SCC) and identifying key stakeholders and their most pressing needs in the chain, so business innovation seldom delivers marketable-results. - Existing development programmes fostering cooperation among stakeholders rarely require QHT, therefore they don't help efficiently turning new technology into disruptive innovation creating or changing markets or market positions. <p>Business (owners/management) realizing these problems are looking for supporting programmes which offer assistance and subsidy to define key stakeholders/needs and turn this knowledge to improve competitiveness, profit and return. Triple-and quadruple-helix or N-axies approaches are methods to help outlining the needs and the owners of the needs. In many cases there could be more than 4 groups of stakeholders in the innovation helix if grouping is based on having the same needs and interest. Generally business is not against such programmes. However they would like to:</p> <ul style="list-style-type: none"> - have free choice among legal ways of cooperation (consortia, partnership, subcontracting, etc.) - get support and guarantees about royalty - be offered grant for preparation of their innovation and application - get subsidy for introducing the result of the innovation - do their business under solid and favorable legal conditions. <p>Business would welcome PCP/PPI actions and/or tenders as well if they were meet above mentioned needs, requirement, and they would get assistance/support in administration to avoid possible irregularities or attacks about the result of the tender. However, Hungarian companies have no experience and marginal knowledge about participating in calls of innovation procurement.</p>
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C. research

<p>Attitude of actors from the research helix towards using quadruple-helix R&I cooperation</p>	<p>HEIs aim to strengthen R+D+I activities related to the field of health and healthcare industry and promote the development of professional networks, knowledge management and knowledge transfer in healthcare by fostering triple/quadruple helix cooperation among business enterprises, nonprofit economic actors, higher education, academic bodies and civil organizations (e.g. end-users).</p> <p>These HEIs also aim to disseminate triple/quadruple helix models, new R+D+I management and knowledge management systems, as well as further development of existing organizational and institutional solutions.</p> <p>Their successful participation in the calls for proposals of Social Renewal Operational Programme (TÁMOP-4.2.1.C “Knowledge-Park” and TÁMOP-4.2.6 “Developing Innovation Ecosystem”) in 2015 proved their commitment to networking, knowledge-transfer and quadruple helix cooperation.</p> <p>The same applies to research organizations interested in health and healthcare industry.</p>
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D. public

<p>Attitude of actors from the public institutions helix (excluding SF owner) – health insurance companies, health care and social care regulator, etc.) towards using quadruple-helix R&I cooperation</p>	<p>Public organizations would join QHC in innovation or PPI and PCP project if:</p> <ul style="list-style-type: none"> → they would be able to make long term financial and technical plans and commitment → conditions of calls for projects open for innovation cooperation would allow and foster to do so → they would get assistance/support in administration to avoid possible irregularities or attacks about the result of the tender → receive guarantees to get the result that they would really use if they are procurers → receive guarantees to get the result that would eliminate problems they detected in a sector. <p>Hungarian public organizations have no experience and marginal knowledge about managing calls of innovation procurement.</p>
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E. OP owners

<p>Attitude of the Operational Programme owner towards using quadruple-helix R&I cooperation</p>	<p>Quadruple-helix (QH) solutions in Hungary are rather scarce. However, the accredited innovation clusters are good basis for the QH cooperation and these clusters have been supported by the Hungarian OPs (GVOP/ECOP, GOP/EDOP and GINOP/EDIOP) since 2004.</p> <p>In addition Social Renewal Operational Programme (TÁMOP/SROP) paved the way by launching calls for proposals to support HEIs to run projects for networking, knowledge-transfer and quadruple helix cooperation.</p> <p>Furthermore, according to the Hungarian RIS3: “In order to implement the visions, all three types of region [Knowledge regions, Industrial production zones, Low S&T driven regions] need to transform their current economic structures in an evolutionary way along the specialization directions. To do this, the cooperation and supportive approach of the local stakeholders are essential. EDIOP has a key role to play in the continuing and extensive involvement of the actors involved, and that the stakeholders identify with the objectives. It is also indispensable that the four key actors (business, research and educational institutions, government, civil society and citizens, collectively, the “quadruple helix”) consciously look for and exploit the opportunities for cooperation at the local level in respect of all three visions. Thus, the local innovation ecosystems filled with contents and operating with the involvement of local actors can contribute to the implementation of the visions.” – Unfortunately EDIOP have not opened specific calls for projects or grants for predefined projects for quadruple helix cooperation (QHC) yet. Furthermore there are only few and not too serious conditions among the evaluation criteria in the project selection processes. Fortunately there are measures (calls for projects) in EDIOP to support 1) R&D competitiveness and excellence cooperation; 2) Research infrastructure development of Higher Education and Industry Co-operation Centers, which could be further developed in order to clearly demonstrate the firm commitment to implement the visions quoted above from the RIS3, and foster entire QHC without any limitation to the participation of the actors, e.g. “government, civil society and citizens”.</p>
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7. Potential improvements of the Operational Programme and other possible improvements in regional innovation ecosystem

The “Potential improvements of the Operational Programme and other possible improvements in regional innovation ecosystem” section provides suggestions on possible improvements for support of R&I in Home Care via quadruple-helix cooperation in 2 levels: via the Operational Programme management, strategic focus and operations, and via any other possible improvements in the regional Innovation ecosystem.

List of possible improvements in the Operational Programme regarding its support for quadruple-helix based R&I in Home Care as based on brainstorming discussions within HoCare Regional Multi-stakeholder group

1. Specific new call/calls with home care and/or telehealth and/or quadruple helix focus
2. Specific new call/calls with LIVING LAB focus and market research activity support
3. Approving support to development, assessment and assurance of care/cure service protocols and methodologies auxiliary to technical/technological innovation
4. Approving support to service and technical/technological innovation of distribution (sales, logistics and marketing) chains developed by clusters to foster the transfer of R+D+I results into marketable products
5. New forms for involving (financing involvement of) all stakeholders of quadruple helix (consortium/partnership, subcontractor, associated partner, affiliated partner, collaborating stakeholders, cluster partners – Possibility/requirement to separate special part/parts for these forms in the project budget)
6. Find special forms of fostering (and financially supporting) the involvement of public stakeholders in R+D+I projects prepared by business+HEI/research partners
7. Find special forms of fostering (and financially supporting) the involvement of end-user stakeholders in R+D+I projects prepared by business+HEI/research partners
8. Solutions for new ways to involve and finance stakeholders to help to avoid public procurement irregularities
9. Putting higher weight on stakeholder analysis before and after launching innovation projects (at preparing project proposals and evaluating them)
10. Stronger requirements for applicants/beneficiaries to find, analyze and rank needs of each stakeholders (per stakeholder – in order to avoid focusing on the needs on just one stakeholder) and trace constraints/aversion to accept innovations in sectors populated by many powerful and highly interconnected stakeholders
11. Seeking possibilities of financing/prefinancing project preparation (not only preparation of the application, but the project itself what has significant impact on undertaking in PCP/PPI projects and other public driven innovation projects)
12. Prepare (more) twin/integrated/complex calls for proposals to exploit new and emerging R+D+I opportunities that address social/health, technical, ICT, environmental and business challenges: the growing demand for more accessible, safer, affordable, higher quality and sustainable social/health services (e.g. one submission of two or more applications for granting offered by different programmes)

Other ideas + possible improvements in the regional innovation ecosystem regarding support for quadruple-helix based R&I in Home Care as based on brainstorming discussions within HoCare Regional Multi-stakeholder group	<p>Improve knowledge, skills, competences and capacities of all the stakeholders of innovation ecosystem to:</p> <ul style="list-style-type: none"> - be able to prepare and implement successful and sustainable innovation projects by utilizing up-to-date / advanced management and implementation tools - raise the level of trust, acknowledgement and adherence to be involved in multi-stakeholder cooperation. <p>Such programmes should take into account the attitude of the stakeholders by building on the strength and opportunities they show and handling the risks caused by the weaknesses and threats explored.</p>
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8. Other information

In this section, any other relevant information for future regional analysis might be added.

Any other relevant information for regional analysis	- Legislation information missing in regional analysis
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9. Information gathered by ...

The information within this template has been gathered for the purpose of regional analysis within the HoCare project (Interreg Europe Programme) by the following organization in cooperation with members of the regional HoCare multi-stakeholders group in the Hungary.

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