DHC+ Strategy 2018 -2020

Contents

The purpose of this document is to outline a strategy for 2018 and the next two years. It has been drafted following the results of a survey among DHC+ members in Autumn 2017 and feedbacks from many members in the course of the first months of 2018.

DHC+ Vision

DHC+ is a community engaged in shaping the future district energy sector and at large the heating and cooling and the energy system by innovating, sharing knowledge and advocating for sustainable future. More specifically DHC+ vision is to:

- Be the knowledge hub for district energy in Europe and beyond. Be the leading community in shaping and driving innovation for the future district energy sector.

- Promote and facilitate networking, matchmaking, visibility and business development opportunities for its members.

- Enable and create more education & training opportunities in district energy.

- Be one of most influential platforms in energy research on EU level by successfully advocating for district energy research policy and by supporting Euroheat advocacy effort with scientific based approach.

- Be the leading player in Europe in communicating on innovation and knowledge in the district energy sector.

Main achievements in period 2015 -2017

Membership. Members grew from 33 organisations at the beginning of 2015 to 48 in March 2018 resulting in an increase of 45%.

Staff. The secretariat doubled passing from two full time and one part time people in 2015 to three full time and three part-time people early 2017. That means the secretariat is increasingly able to provide a wider and deeper offer to its members (at the same fee).

EU projects. In 2015 EHP/DHC+ was coordinator of the Stratego project and had limited participation in other 3 projects that finished during that year. Since then EHP/DHC+ decided not to be coordinator anymore but rather to ensure presence as communication partner for projects that were dealing with key topics (see point section topic). In the last 3 years EHP/DHC+ successfully managed to be part of 9 projects (with a very success rate). The secretariat has successfully supported many of its members in getting an EU funded project and around 70% of its members got in at least one EU project supported by DHC+.

Communication and outreach. DHC+ has reached out to a very wide spectrum of heating and cooling actors, establish links and cooperation with most existing initiatives in DHC (IAE, RHC and SNET ETIP, 4DH, Celsius etc) and strengthen dialogue with external stakeholders in order to be recognized as a natural interlocutor for innovation in DHC. Events and workshops organized in the last years have been very well attended by members and stakeholders. The International DHC+ Student Awards and DHC+ Summer School greatly contributed to make DHC+ a known brand. These two initiatives are now very well established.

Advocacy. DHC+ is continuing to advocate on research energy topics in relevant fora, platforms and via projects results. DHC+ is part of the Board of the two most relevant European Technology Platforms (on renewable heating and cooling and on smart energy networks). Stratego has been a paramount project and the most important source for EU Heating and Cooling Strategy. There is a huge amount of communication material, studies and content produced of out the increasing number of projects and members' studies that is greatly benefitting the EHP policy work and providing a scientific-based approach to the advocacy work.

Relation with EHP. Since 2015 EHP and DHC+ have come much closer and have set up an integrated approach and a mutual reinforcing relationship which had benefited both sides. DHC+ is much more aligned to EHP advocacy objectives, EHP board and members are much more informed on DHC+ activities than in the past. The administration and communications departments are supporting both DHC+ and EHP members.

Emerging trends and drivers within DHC+

In short, DHC+ has truly become a recognized hub for innovation district heating and cooling well rooted within the EHP group. It is consolidating its role as content-based and forward-looking platform where industry players and innovators look at when they want to understand

where the sector is heading. There are a number of dynamics and developing trends that are particularly significant for 2018:

More diversified offer. Thanks to a growing number of projects, DHC+ is now better equipped to offer a more diversified offer to its members. This will increasingly be done via the creation of specific working groups via a more regular use of web-meetings, webinars, workshops and dedicated events.

Wider range of topics. From this year, DHC+ will be therefore able to develop working groups or at least provide contents and exchange occasion in relation to different topics (for a non-exhaustive list of topics, see last section of this strategy). It will be up to the chairpersons and the secretariat to propose key topics each year by listening up to the request from the membership base.[1]

Attracting more members. Given the recent success in getting more EU projects, the secretariat will limit its presence in new consortia and will rather dedicate more energy in attracting new members.

Synergies between innovation and industry and support to business development. It is quite clear that members are not interested in simple technical discussions but they want to address economic analysis and business considerations as well. More and more members ask the secretariat to support them in their research and business development. Utilities and manufactures see DHC+ also a way to promote their innovative solutions and find new approaches to grow. Research actors are interested in bringing an innovation to market and they look for partnership with the industry. DHC+ has traditionally focused in supporting members to have access to EU funded calls and of course it will continue to do so but it will dedicate more efforts in synergies between innovation and industry and more opportunities for business development of its members.

Governance aspects. Even there are no specific governance issues related to DHC+, this year will be a good occasion to check if the governance architecture of DHC+ may need some updates. Some aspects worth considering:

- DHC+ Steering Committees (de facto a DHC+ General Assembly) have been (and still are) a good format to shape members involvement but due to the regular growth of attendances they are increasingly difficult to manage. They will continue to take place (maximum twice a year) but they will be most likely structured in working groups/specific topics.
- DHC+ terms or reference will need to be updated and framed in the EHP context.

Need to include more SMEs and start-ups in DHC+. It is also important to underline that emerging and innovating solutions are often developed by start-ups or small companies but their presence in DHC+ is rather limited because there is only one flat fee for companies,
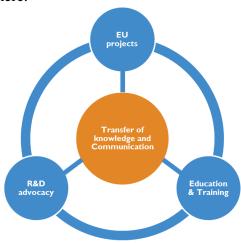
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[1] In example of the digitalization topic, DHC+ pushed for this topic in 2018 because utilities and technology providers were particularly interested in this "mega-trend" and asked DHC+ to provide a forum for continuous exchange on the topic.
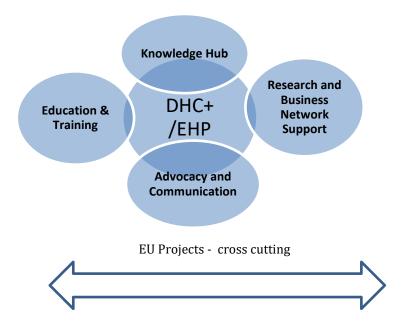
irrespectively of their size. It is therefore important to amend the fee structure to have more small companies in DHC+.

Priorities Outline

In the period 2015 -2017 DHC+ activities were organized according to the priorities as pictured here:

For the period 2018-2020 a revised version is proposed below. Each priority (or pillar) corresponds to a sentence of the vision. On the basis of the previous considerations the new proposed structure for 2018 -2020 is:

The pillar "EU project" is not identified as pillar anymore not because is less important but because it is not a goal per se but it is a cross-cutting mean to 1) promote business development

of members 2) provide a space of exchange for discussion and 3) empower communication and advocacy. In any case EU projects will remain a key aspect of our work.

The reasoning and the main activities for each priority are explained here below. Each sentence of the vision is a priority for which a number of objectives are outlined.

Knowledge Hub

Introduction: DHC+ growth in terms of projects, staff and members represent a big chance to provide a more diversified offer to members via working groups or dedicated theme. Each year the DHC+ Chairs in coordination with the secretariat should decide which themes should receive priority. While until a couple of years ago the main content was related to the Stratego project, today DHC+ can rely on at least 9 projects, each one of them related to a different topic (see section topics) and is also affiliated to several other supported projects.

A huge amount of studies, deliverables and work has been or being done in the framework of these projects. On top of this, DHC+ members are growing in number and they also producing a very significant number of reports, analysis and technologies that can be a great resource for the DHC industry. DHC+ is therefore strategically positioned as "Hub" since it is at the core of a growing flow of information and resources related to DHC. This trend is quite recent. At the moment all this info is channelled to members via the DHC+ updates, via the website and via social media. However retrieving the information it may be hard for an external stakeholder since he/she should know the different projects websites and where exactly the info is saved.

In response to this DHC+ staff could actually develop a resource based via the DHC/EHP website where all reports, studies, trainings and videos are categorised and accessible (at least to the members). For each topic, there will be a list of links referring to EU project results or members' works.

Vision for Knowledge Hub:

Be THE knowledge hub for district energy in Europe and beyond. Be the leading community in shaping and driving innovation for the future district energy sector.

Priorities	Objective	Activities
Knowledge Hub	Be the leading community in shaping knowledge and innovation in district energy	• Continue to focus on emerging trends in DHC (addressing technological, market-oriented, social aspect etc.) • Have links and cooperation with all existing initiatives in DHC R&D (e.g. IEA, 4DH, Symposium, Celsius, national initiatives, more EU projects etc) • Continue to get new members that have expertise in most innovative areas • Open up and reach out to start-ups

		• Scout and explore cooperation with key actors beyond Europe and promote members' know-how in the world.
	Organise discussions around technical and market related topics	• Structuring and running working groups or dedicated themes on key topics. See topics section.
	Make DHC+ the first entry point for accessing information and resources on district energy	• Create a web area where members can access to have info on specific themes. For each theme the user will have access to resources – studies, trainings, videos etc - from EU projects and members • This tool will support the user by providing a step-by-step approach in getting district energy in the ground and by highlighting members' expertise.
	Facilitate exchange of information among members and among members and most closed groups of stakeholders	• Organise internal meeting for members and occasions of exchange between members and other key stakeholders (EHP members only, cities, investors, customers, start-ups and innovators from energy sector)

Research and Business Network Support

Introduction: As already explained more and more members ask the secretariat to support them in their business development. DHC+ has traditionally focused in supporting members to have access to EU funded calls and of course it will continue to do so but it will dedicate more efforts and synergies between innovation and industry and more opportunities for business development of its members.

Vision for Research and Business Network Support:

Promote and facilitate networking, matchmaking, visibility and business development opportunities for its members

Priorities	Objectives	Activities
Research and Business Network Support	Foster participation and matchmaking of its members in EU project	• Development of supporting documents for the members regarding different calls • Promote and inform its members about possible partnership • Issue Letter of Interest • Co-organisation / participation to projects related events / conferences • Participation of the Platform as partner, for activities covering its core competence

Priorities	Objectives	Activities
	Visibility and promotion	• Promote members via Euroheat/DHC+ website and social media outreach • Showcase members' innovation • Give members preferential access and speaking opportunities to events, workshops, webinars, etc
	Facilitate members Networking and development	• Get secretariat support in connecting to a specific country of Europe or to a specific group of stakeholders • Promote partnerships among members • Promote partnerships of members with cities /strut-ups and investors • Foster cooperation research and companies
	Support members' know-how	• Create/promote/give members access to trainings, insights and knowledge
	Facilitate investments in district energy	• Explore the possibility to provide matchmaking services to develop and scale up investments in district energy

Education & Training

Introduction: The success story of the DHC+ Summer School and the DHC+ Student Award show the high interest of young researchers in the field. Education and training are of high relevance for the future of DHC in Europe. A widespread technical and economic understanding of DHC is the basis for innovation and for strengthening DHC in the European energy sector. Summer School and the Student Awards are established initiative. Additional activities will be started that allow members to profit from the large scientific and practical knowledge that already exists within DHC+.

Vision for Education & Training:

Enable and create more education & training opportunities in district energy

Priorities	Objectives	Activities
Education & Training	To promote and encourage further DHC studies in Universities' curricula	• Map and list existing courses that have relevant DHC components as a tool for interested students • Promote liaison among the existing courses and encourage creation of new courses in countries where these DHC-related studies are limited.
	To promote DHC among students and young professionals	• Continuing and promoting DHC+ Student Awards and similar activities • Continuing and expanding DHC+ Summer School and similar activities

Priorities	Objectives	Activities
		• Design a new tool/ simulation game which would recreate challenges of setting up a district heat network
	To promote education & trainings for professionals	• Develop and support online and video trainings with priority for the ones made by members targeting also professionals

Advocacy and Communication

Introduction: Advocacy and communication are fundamental and defining activities of DHC+. Please find below a specific list of related activities but it has to be kept in mind that communication and advocacy are at the core of our association so one may consider that all our work at the very end is about these two goals.

Vision for Advocacy and Communication:

Be one of most influential platforms in energy research on EU level by successfully advocating for district energy research policy and by supporting Euroheat advocacy effort with scientific based approach

Be the leading player in Europe in communicating on innovation and knowledge in the district energy sector

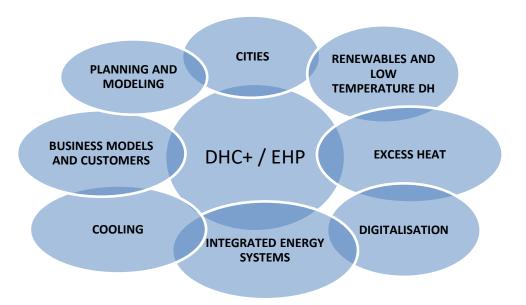| Priorities	Objective	Activities
Advocacy	Promoting DHC research to European policy makers / stakeholders Positioning DHC in EU R&D policy	• Continuous engagement in energy research policy (SET Plan etc) • Continuous participation in other key EU platforms (e.g. RHC Platform and ETIP SNET)
	Support Euroheat advocacy effort via scientific/evidence based approach	• Make use of projects outcomes and members' studies to influence policy work • Facilitate and develop work on H&C Roadmaps, Vision etc

Communication	Confirming the public profile of DHC+ being the leading technology Platform for DHC	- Cover emerging trends in DHC - Have links and cooperation with all existing initiatives in DHC R&D (e.g. IEA, 4DH, Symposium, Celsius, national initiatives etc) - Be partner or supporter of key EU projects - Continue to get new members that are strategic players in the sector covering most European countries and beyond - Strengthen dialogue with external stakeholders to be recognised as a natural interlocutor for innovation in DHC (R&D electricity players, EU etc)
	Strengthen traditional communication activities	- DHC+ newsletter - Website - Regular use of social media (mainly Twitter, and LinkedIn) - Organising, attending and speaking at research conferences, seminars and networking events - Elaborating and implementing one DHC research conference or similar DHC+ event
	Improving communication among DHC+ and EHP members	- Organise more webinars, telco and events open only to members - Promote cooperation and partnership among members

Topics

Differently from previous versions of the DHC+ Strategy, it has become important to specify which topics will be prioritized. The table below identifies the main parameters linked to the identified key topics. The list of topics should be updated every year and the prioritization of the topics should be suggested by the Chairpersons and the secretariat by consulting and listening to members needs and by taking in account opportunities occurring during that year.

KEY THEME	Research & Innovation	Tools, resources & actions	Key messages	External networks	Policy developments (first DHC+ and then EHP contex)
RENEWABLES / LOW TEMPERATURE DH	SDHp2M HRE4 (RES potential / sources) Cool DH / Tempo (LTDH) ReLATED	Need to better highlight the importance / growth of RES in DHC Active monitoring and involvement in existing initiatives linked to decarbonization	District energy can enable the integration of very large amounts of heat from renewable sources, especially in cities Focus on solar thermal, geothermal, sustainable biomass The share of renewables in the district energy fuel mix more than doubled from the year 2000 (11% to 28% in 2015) Move towards low-temperature DH integrating more RES & waste heat	EUFORES RHC Technology Platform 4DH and symposium DH conference --- DecarbHeat DecarbEurope RES associations IEA DHC Annex TS2	Update research priorities in RHC Platform SET-PLAN ___ Finalisation & implementation of RES directive review Sustainability criteria for biomass
EXCESS HEAT	ReUseHeat HRE4 (excess heat potential / sources) Cool DH / Tempo (LTDH) EPOS	Need to better map & engage with excess heat providers Increased visibility + clarify terms (excess heat / recoverable heat / waste heat ≠ heat from waste…) Investigate business models Enlarge ReUSEheat advisory group to more members	We must stop wasting energy There is on average 3 times more renewable and excess heat available than is required to meet high levels of district energy supply Move towards low-temperature DH integrating more RES & waste heat	Excess heat providers (data centres, industrial facilities, transport…) Organisations representing industrial processes & power generation	Include R&D on waste heat Finalisation & implementation of RES directive review Circular economy

DIGITALISATION	STORM TEMPO Promotion of DHC+/EHP working group on digitalisation	Better use of project resources (e.g. videos on digitalisation) Digital Roadmap Promotion of DHC+/EHP working group on digitalisation Digital Heat event (STORM final conference, May 2018) Digital aspects introduce in summers schools lessons	Digitalisation is no longer a trend but a way forward for the energy system Multitude of digital opportunities available for the district energy sector (control, metering, demand response to processes optimisaiton via drones…) Link between digitalisation & increase uptake of excess heat / RES & increased efficiency	Digital sector organisations (DigitalEurope…SmartEn) Digital services companies KicInno group	Digital R&D funding for heat ----- Data protection EU digital agenda Billing / metering (EED) Smart grids
INTEGRATED ENERGY SYSTEMS	Magnitude HRE4 SMILES FLEXYNETS	EN+EFF workshop on sector coupling Sector coupling session at digital heat event Better engagement with wider energy stakeholders, utilities, green NGOs	Maximise synergies among energy systems Thermal storage is 100 times cheaper than electricity storage A transition to district energy systems, combined with energy saving measures, could contribute as much as 58% of the carbon dioxide emission reductions required in the energy sector by 2050. District energy allows for a transition away from fossil fuel use and can result in a 30-50% reduction in primary energy consumption.	IEA group on Hybrid district energy network Platform 2030 (?) Electricity associations IEA DHC Annex TS3	ETIP SNET Include links among energy sectors in EU legislation (electricity + heat + transport) ----- Electricity market design Energy planning & modelling for 2030/2050 policies

BUSINESS MODELS AND CUSTOMERS	ReUseHeat TEMPO HRE4 STRATEGO STORM UpgradeDH	Workshop on business models in DHC+ steering committee Crowdfunding study Relations with city investor group Focus on waste heat business models Re-engage with stakeholders in Eastern countries (DH refurbishing)	Include customer and consumer point of view in all discussions	Investment group EIP Investor standardisation group for DH Association related to customers (Housing Europe etc)	Promote studies on market design /business models/ customer/consumer and DH
PLANNING AND MODELLING	Heat roadmap Europe (HRE)	Support cities with better instruments for planning Final HRE workshop early 2019	Promote HRE /Stratego vision	Organization involved in modeling, city planners	Support EHP policy action with scientific-based vision and roadmap ETIP SNET
CITIES	PLANHEAT HRE4 (local mapping) ReUseHeat (city demos)	Active involvement in the follow-up of the CELSIUS network (specific tasks TBC but may include content development, social media, events…) Launch event cities network Promotion of EHP/DHC+ expertise in cities networks, event	No energy transition without sustainable cities. No sustainable cities without sustainable heating and cooling. No sustainable heating and cooling without district energy. Smart cities are district energy cities If the urbanisation trend continues and appropriate investments are in place, almost half of Europe's heat demand could be met by district energy by 2050.	Cities network (post CELSIUS – see MoU) UNEP DES initiative	Implementation of EU policies at local / regional level Energy planning Energy mapping EU Urban Agenda Regional policy & financing

European hub for research & innovation
in district heating and cooling

COOLING	INDIGO	Maintaining & improving coolingEU platform (new / improved communication plan & tools) and its R&D group *2018 campaign months:* March, August (TBC)	Cooling demand to significantly grow in coming years Integrated systems approach to include cooling District cooling can meet cooling demands with lower environmental impact / electricity needs	CoolingEU Other cooling initiatives (UNEP Cooling For All)	Include cooling in EU policy discussions