Technology and Innovation Annual Report

December 2020

INTRODUCTION

During 2020, HCAP, under the impact of the pandemic, intensified its efforts towards the digital transformation of its portfolio companies, having as ultimate aim its contribution to the country's convergence with EU performance. Emphasis was placed on extroversion and cooperation actions as catalysts of acceleration for digital transformation, promotion of the culture of innovation and adoption of advanced technologies to meet the real challenges of its portfolio companies.

THE ACTIVITIES IN DETAIL

The technology and innovation activities and initiatives undertaken during 2020 include:

- **Innovation Network activities.** Following the establishment of the Network, with active support from HCAP subsidiaries' Board of Directors members, the collaboration and experience transfer between the Network members commenced in the post COVID-10 era, focusing on the pillars of organizational processes, digital training, customer experience, and data security. The core thematic areas for the Network work groups were identified, including technologies and solutions around blockchain, cybersecurity, big data, IoT, smart buildings & infrastructures, e-mobility και machine learning.

  o On the thematic area of cybersecurity, following the Network efforts, an 'Optimization of Physical and Digital Security Plan' was produced and shared with the HCAP subsidiaries in May. The Plan documented the minimum actions required by HCAP companies in order to raise the level of infrastructure security regarding Information Technologies and Operational Technologies, with regards to both physical and digital security. The collaboration will continue during 2021 for the identification of cybersecurity measures under implementation, based on the plan recommendations and best practices, taking also into consideration the directions set by the emerging "National Cybersecurity Strategy".

  o On the thematic area of e-mobility, a workshop was organized on December 11th, with participation of representatives from the Network member enterprises. Presentations described the strategy and activities of the respective HCAP subsidiaries for transition to e-mobility, according to each enterprise's business scope and the participants discussed in detail the potential for synergies on charging networks for electrical vehicles, the replacement of their fleets of vehicles to electrical ones, the co-creation of digital services for and about e-mobility and the contribution of e-mobility initiatives to the enterprises' ESG performance. Additionally, energy performance topics were also discussed, including energy efficiency and CO_2 transmissions reductions throughout the enterprises' infrastructure and operations. The collaborations and concerted planning of actions around e-mobility will be a core work area for the Innovation Network in the upcoming period.

  o Other thematic areas for which primary investigation took place during 2021 were smart metering and the production and delivery of open data.

  Additionally the Innovation Network microsite (http://innovation.hcap.gr/?lang=en) was revised to comprise a central information hub for the innovation and technology related activities of the member enterprises.

- **Webcast series: «Unlocking Digital Potential»:** HCAP's Innovation Network in collaboration with MIT Enterprise Forum Greece, organized during the summer of 2020 a series of seven Webcasts on the exploitation of digital potential of businesses and how technological solutions can address tangible problems for public and private enterprises. The Webcasts under the title "Unlocking Digital Potential" took place from 19th June to 9th July 2020 and are available through the web address https://hcap.labonline.gr/. World-renowned members of the international scientific and technological community presented their proposals on a series of subject matters, such as Big Data, cybersecurity, smart mobility etc., while and C-level members of HCAP's portfolio companies presented innovative activities and digital transformation projects under planning or in progress. In each Webcast, the presentations were followed by a discussion around the topic of each webcast, with participation from the audience. The thematic areas and key points of the individual Webcasts were as follows:

  - Building an Innovation Culture in large State Owned Enterprises: Opportunities and challenges for the adoption of digital technologies.

  - Predicting and Preparing for Disruptive Events: Prediction of events such as the COVID10 pandemic and the design decisions required for the establishment of resilient infrastructures.

  - Physical and Digital Security: The challenges of large enterprises in digitalizing their processes and services, as well as ensuring security and data privacy.

  - Future of Mobility: Experiences from international activities and pilots in Athens.

  - Data-driven forecasting: How can Big Data improve the operations of public enterprises.

  - Blockchain: The opportunities and challenges for public enterprises, based on international best practices and relevant activities in the HCAP companies.

  - Discovering and funding innovation: Reinforcing the optimization of operations and the quality of services for public enterprises.

  Throughout these Webcasts:

  - Several developing technologies, disruptive operational practices, innovative delivery models and added value services (such as blockchain, dynamic route adaptation in public transport, seamless combination of private and public services for the citizen and Visual Analytics services on water consumption) were recognized as 'game-changers' for public service companies.

  - Awareness of the power of digitalization has significantly increased among HCAP companies' management and personnel who attended the Webcasts series, thus enabling the alignment of digital transformation mindsets and the identification of multiple opportunities.

  Following the Webcasts, the extended summary of discussions and key messages document was published and made available from the Innovation Network microsite.

- **Digital transition activities - Recovery Fund.** HCAP, within the strategic framework for the acceleration of digital transformation, coordinated, processed and submitted within August the proposals for urgent investments on digital transition on behalf of its portfolio companies. The proposals took into account best practices but also the complementary of the proposed interventions with the individual digital activities and projects of the HCAP companies.

- **Digital Innovation Hub.** In order to support the digital transformation and encourage innovation in the ecosystem of HCAP subsidiaries and related sectors of the economy, HCAP joined a promising consortium that will establish a **Digital Innovation Hub of the Attica Region**. The consortium comprises of NSCR "Demokritos", as a leading partner, and renowned organizations and institutions from the research & academic community (AUEB, NTUA, RC Athena, ICCS), the private sector (Found.ation, ACEin, Uni.Fund , NBG, the Hellenic Federation of Enterprises - SEV, the Hellenic Chamber of Hotels), the technology transfer community (Archimedes) but also the local government authorities (the Athens' Development and Destination Management Agency and the Regional Development Fund of Attica). The consortium submitted in October a proposal for funding of the actions of the Hub entitled 'Smart-Attica Digital Innovation Hub (AtHeNAI)' in the call for expressions of interest for the selection of the "European Digital Innovation Hubs – EDIHs" of the European Program 2021–2027 » (Digital Europe Program). The proposal was ranked in the topmost position at national level, after evaluation, and will subsequently be evaluated at European level, in order to join the EU-approved European Digital Innovation Hubs network. This participation presents unique opportunities for the companies of HCAP. The Hub will implement the idea of a smart region in Attica by extending the Smart City concept and in this context, HCAP has undertaken the representation of its subsidiaries and their networking with the innovation ecosystem in a regional, national and European level, the facilitation of participation in test before invest activities as well as the implementation of training and digital upskilling actions.

- **Competence Center in the Energy sector**. With the support of HCAP, EYDAP and OASA joined in November an initiative to establish a national-level Competence Center for providing specialized services of innovation and technology transfer in the field of Energy. The Competence Center will be implemented by a consortium comprising of the main academic community and private sector stakeholders in the energy sector and will address the full range of innovations in the field of energy technologies, from energy production and storage, environmental footprint, transmission and distribution networks to energy applications and e-mobility. The relevant proposal for the establishment and operation of the Center was submitted to the "Capacity Centers " call of the Operational Program "Competitiveness, Entrepreneurship and Innovation (EPANEK) of NSRF 2014-2020.

  - **Incentivized competition series**: In order to support and foster (a) the direct collaboration of HCAP subsidiaries with the innovation ecosystem, research/academic institutions and the private sector, (b) the development of a culture for producing and exploiting digital, open data within the public enterprises and (c) the involvement of researchers, academics, data scientists and startups to utilize such data at scale, HCAP, in collaboration with MIT Enterprise Forum Greece, delivered to its subsidiaries in late 2020 an environment and framework for designing and hosting a series of innovation-driven competitions, entitled 'HCAP Incentivized Competition series' (see the relevant website: https://hcap-challenge.mitefgreece.org/). For these competitions, the subsidiaries can invite interested stakeholders to provide solutions to operational challenges by describing a challenge, delivering the relevant digital data and designing a process for review and testing of the provided solutions, in order to ensure their fair evaluation. Examples of challenges that the interested participants will be faced with include the identification of faults in utility networks, the design of preventive maintenance solutions, the accurate estimation of future consumption in utilities, the establishment of automated digital contracts etc. The solutions are expected to be based on data harvesting and processing, data analysis,

machine learning techniques, utilization of databases, distributed data and distributed data processing etc. Within November, the first competition of the series was announced by EYDAP, the Water Supply and Sewerage Company of the greater metropolitan area of Attica. The competition is entitled "Digital Innovation Challenges of EYDAP" (hosted under the microsite https://hcap-challenge.mitefgreece.org/eydap-innochallenge/) and is planned to conclude within May of 2021, while the next competitions of the series are under preparation.

- **Digital strategy of the HCAP companies.** During 2020, the collaboration of HCAP with its subsidiaries for designing and implementing a mid to long-term digital transformation plan based on the business needs and priorities of each company was continued. Among others, the collaboration involves documenting and monitoring active and under design projects with digital focus, as well as the adoption best practices for digital transformation.

- **Digital transformation projects in collaboration with the subsidiaries:**

  o <u>Synergies through the creation of a single geographic information system (GIS)</u>. HCAP, during 2020, has actively contributed to the pilot implementation of a single geographic information system (GIS) relying on the geospatial data of the companies in its portfolio and including other openly available geospatial data. The result can be used as a tool for implementing a single system for the strategic management and utilization of the real estate properties of SOEs that will add value. The collection of required data is conducted in close collaboration with HCAP portfolio companies. In certain cases, such information is not already documented in existing systems. For these cases, HCAP has undertaken the responsibility to transform the data to ensure homogeneity across the companies and insert the data to the single GIS system for the first time. The process includes a review of the data entries, imposing corrections to the original information provided by the subsidiaries and thus contributes to an up-to-date recording and representation of a significant part of the public enterprises' real estate properties.

  o <u>ELTA digital transformation</u>. Following the financing and the assignment of consulting services by HCAP on behalf of ELTA regarding the company's digital transformation, the strategic prioritization of the digital upgrade and modernization of the company and the implementation roadmap were delivered at the end of 2020.

  o <u>AEDIK e-business platform</u>. In the framework of actively supporting digital transformation activities among its subsidiaries, HCAP contributed with best practice recommendations to the design and implementation of a digital transactions' and management of business operations' platform in AEDIK. The platform is expected to provide the functionality of automated transactions via mobile devices for corporate and non-corporate customers, thus significantly improving their experience and servicing times.

- **HCAP's Digital transformation**. During 2020, the IT strategy plan of HCAP was established, with the aim of adopting systems and solutions that facilitate and modernize the daily operations of HCAP and support the activities of HCAP regarding its subsidiaries. The plan specifies the roadmap for the adoption of digital means of cooperation and execution of operational activities within HCAP as well as solutions for the digitalization of performance monitoring and consolidated reporting regarding the subsidiaries. The plan takes into account current technological developments and options in order to adopt an integrated digital toolkit for hosting business operations.