

Helsinki

# Helsinki News

3/2018

Personalization and digitalization are keys to

- Success of Helsinki education system
- Strengths of Helsinki health ecosystem



A key theme at Helsinki schools is digitalization of learning.

# Every school in Helsinki is a good school

Helsinki schools personalize learning paths to ensure equal opportunities for all

The first ever PISA scores in 2001 put Finland in the limelight of the global education community: Finnish 15-year-olds ranked first in the world in this international test designed to measure skills needed to thrive in the modern world.

Ever since the momentous test scores, the schools of Helsinki have hosted delegation after delegation of education specialists from all over the world.

“The wide interest gives us assurance that we’re on the right track,” says **Liisa Pohjolainen**, Executive Director of the City of Helsinki Education Division.

“What is more, the interest gives us an opportunity to present to the world our greatest strength: differences in learning results among Helsinki schools are markedly small by international standards.”

**Every child can learn** is the motto of the Helsinki Education Division.

“Starting from this guiding principle, we seek to design our schools and schoolwork so that every child and young person has equal opportunities for learning,” Pohjolainen emphasizes.

“But we realize that young learners differ in their ways of learning. Therefore we’re putting more and more emphasis on personalized learning paths, which recognize each student as an individual as well as their needs, goals and cultural backgrounds. By following their own path, everybody can find their potential.”

Helsinki is today an increasingly multicultural city. Already more than 20% of the student body in Helsinki comprehensive schools is foreign-born. As a response, schools pay close attention to learning differences among foreign-born children. The efforts rely on Helsinki’s long-established principle of positive discrimination – schools with more challenges receive more resources than the rest to meet their needs.

“By so doing, we have managed to maintain the overall high quality of all our schools. Education is an important equalizing factor in Helsinki,” Pohjolainen asserts.

**Personalized learning** is facilitated by the digitalization of schoolwork, one of the main focuses in Helsinki schools today.

“Our approach to digitalization is to apply technology in ways that enrich learning. Technology allows us to develop new pedagogy, so we don’t use digital tools to repeat what we did in the past,” Pohjolainen explains.

Digitalization facilitates learning in non-traditional environments and the application of new learning concepts such as phenomenon-based learning.

“Digitalization also opens new opportunities to focus on the individual. For example, data analytics could give us detailed information on the progress

## Helsinki Education Week

**Excellence and equity**  
in education

More than **100 events**

**Hands-on track:**

Workshops by  
teachers  
and students

**Dialogue**

**New annual event**  
in Helsinki

First edition  
5–11 November 2018

**Explore track:**

Innovations and  
learning  
environments

**Networking**

**Organized by**

City of Helsinki  
in partnership with HundraED  
and Helsingin Sanomat

[helsinkieducationweek.com](http://helsinkieducationweek.com)

of each student,” Pohjolainen envisions the future of schoolwork.

Helsinki collaborates with the University of Helsinki in the Growing Mind project to develop pedagogy. One theme of the project is how digitalization impacts learning.

**“The world has shrunk** in the sense that educators worldwide face similar challenges in their efforts to equip children for the future,” Pohjolainen says.

She asserts, “Helsinki wants to learn from the international education community, as well as presenting Helsinki’s achievements to the community.”

To advance international exchange of ideas, the City of Helsinki organizes Helsinki Education Week in partnership with HundraED, an organization that advances excellence in education, and the Helsingin Sanomat daily newspaper. Helsinki Education Week presents the pioneering work done in Helsinki preschools, comprehensive schools and secondary education, as well as promoting cooperation among international education experts.

# 100 inspiring education innovations every year

HundrED seeks solutions to educating children for the future

Design for Change of India turns children into change agents by empowering them to be socially aware and active in their communities. The Global Oneness Project of the U.S. educates children about global cultures by producing and distributing documentaries to schools free of charge. Student Agents spread ICT skills in schools by sharing their own skills with peers and teachers; dozens of schools in Finland alone already rely on Student Agents.

“Schools and educators all over the world do magnificent things, but little is known about them,” asserts **Saku Tuominen**, Founder and Creative Director of HundrED. The Helsinki-based non-profit organization explores the world for impactful and scalable innovations in primary and secondary education, sharing them with the global education community.

“All educators try to envision what the world will be like in 10–20 years’ time and seek ways to prepare children for the future. There’s general agreement about the skills that schools should teach children to make them ‘future-proof’: thinking skills, creativity, empathy and curiosity.

“But what should teachers do? How should they teach? Teachers are in a merciless situation, surrounded by uncertainty.

“We seek to unburden teachers by identifying and disseminating practices that are proven to work. The challenge is one of implementation: how to effect change fast and with high standards.”

HundrED works through HundrED Ambassadors in different countries, who actively seek education innovations, and it builds a global HundrED community of educators to work together on best practices.



Markus Kontainen / HundrED

Hello Ruby in Tokyo. Hello Ruby, developed in Finland, is an inspiring method to teach programming especially to young girls.

Every year HundrED compiles 100 effective education initiatives from around the globe. The newest set will be revealed at the HundrED Innovations Summit held on 7–9 November 2018, in conjunction with Helsinki Education Week.

“We want to help every child to flourish,” Tuominen sums up HundrED’s mission. [HundrED.org](http://HundrED.org)



Kalasadama Health and Wellbeing Centre: guides assist customers in the lobby.

## Rethinking public health and social services

The Kalasadama Health and Wellbeing Centre pioneers new outpatient care and personalized service concepts

The Pepper robot meets customers in the lobby of a new health care and social services centre in Helsinki's rapidly evolving district of Kalasadama. "Need instructions for the automated registration? How about guidance around the building? Wish to give feedback?" Pepper enquires.

The physical environment of the custom-designed building is the embodiment of a reform taking place in the health and social services provided by the City of Helsinki.

"We're a model of future outpatient care and service concepts, as well as an innovation and testing platform," says **Lars Rosengren**, Medical Director and Project Manager of the Kalasadama Health and Wellbeing Centre.

The background to the reform is the scattered nature of services, which have made customers with multiple conditions or issues go from one office to another in search of answers, and customers with single conditions to return multiple times.

"Our guiding principle is customer orientation," Rosengren explains, asserting that Helsinki has set out to do things better.

Customers are categorized according to their care needs, and those with the most needs are served with a care model that ensures coordination, a proactive approach and continuity in services. Services are focused and grouped according to three types of customers, which are, by a rough definition, families, the elderly and working-aged customers; Kalasadama primarily serves the third type with comprehensive services ranging from normal health care to social services.

The future of public health care will be strongly digital in Helsinki: digital tools will make self-analysis possible, data analytics and AI will help professionals with analyses and alarms, and chatbots can be used for initial diagnoses. Already video-aided remote care is the reality for many seniors. Digitalization will allow increasing personalization of services.

"Services that don't require physical presence will in the future be provided electronically 24/7," Rosengren says, pointing out the dilemma of public health services – how to stretch existing resources to provide care for all who need it.



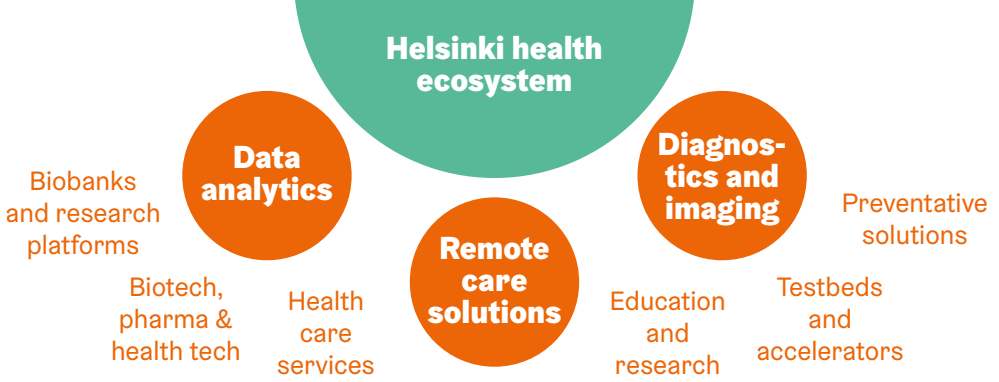
FinnGen genome research

# In the vanguard of personalized health care

Helsinki is home to pioneering medical research and digital innovations that form key elements in the future of health care

**FinnGen** is a research project that matches genome information, based on samples gathered from a large population of Finns, with digital health care data from national Finnish registries. The goal is to deepen understanding of the origins of diseases and how to treat them. The findings will produce new solutions for personalized medicine.

The world's first personalized medicine project at such a scale, FinnGen demonstrates the key strength of medical research in Finland: based at the University of Helsinki, the project is an exceptional public-private collaboration, which brings together several Finnish universities, hospitals, governmental health research and funding organizations, biobanks and international phar-



maceutical companies – as well as thousands of Finns.

“Helsinki possesses an exceptionally robust health ecosystem,” says **Kimmo Koponen**, a senior business advisor focusing on health at the Helsinki Business Hub economic development organization. “That ecosystem is a network of actors and collaborations that enable world-leading life sciences research and innovations.”

**Isaacus** is another example of the operation of the health ecosystem. Currently under development by the Finnish Innovation Fund Sitra, Isaacus will be a digital health hub – a national data lake – containing wellbeing data on the Finnish population collected from hospital districts and population registers. The raw data can be used in research and by both public and private sector actors.

“Data is the new gold,” Koponen comments. He continues, “Finland has a long history in collecting population data, and now that strength is complemented by data analytics and artificial intelligence competences in the Helsinki health ecosystem. The combination is an invaluable asset in life sciences R&D to produce personalized health care solutions.”

**Buddy Healthcare** is a Helsinki startup that automates care paths. Their BuddyCare App is a tool that streamlines pre- and post-surgical procedures for both patients and hospitals. The app

makes sure that the patient knows and takes care of all things required before and after procedures. Besides easing the process for the patient, the app takes many worries away from the care personnel.

BuddyCare represents a particular strength in the development of personalized health care in Helsinki: digital health. Digital solutions for health care range from health apps to virtual hospitals.

“Finland is among the global pioneers in the digitalization of health care,” Koponen assures. “Overall, Finland is a technology-driven country marked by easy acceptance and early adoption of new technologies. An important factor in our digital health R&D is the testbed opportunities provided by health care providers, both public and private, which lend their crucial clinical expertise to co-development.”

One proof of the strength of the Helsinki digital health sector is the selection of Helsinki as the host city of the digital health conference HIMSS Europe 2019 & Health 2.0 2019 Europe, held 11–13 June 2019.

“**The future of health care** is not in ‘one fits for all’ but in proactive and preventative care, in which services and treatments are tailored for individuals, and technology takes over many tasks now performed by medical professionals. The Helsinki health ecosystem provides an ideal platform for the development and points the way,” Koponen affirms.

# New Children's Hospital: Designed to serve families

New Children's Hospital, a much anticipated public hospital of HUS Helsinki University Hospital, opened doors in September 2018. The hospital is a state-of-the-art unit in HUS's top-rate specialized health care for pediatric patients. The hospital treats all pediatric illnesses, and it serves all of Finland in demanding pediatric medicine, such as cardiac surgery, organ transplantations, complicated cancers and allogenic stem cell transplantations. Patients range from preterm babies to 15-year-olds, while the majority of patients are younger than three.

Efforts to heal children go beyond medical operations: the hospital environment has been designed for the wellbeing of children, starting from design details and extending to digital solutions. Parents can stay with their children at all hours, even in intensive care.

"The healing environment of the hospital is created by many elements that stimulate children and take their thoughts away from illness. There are home-like elements and elements to give children some control of their environment," says **Pekka Lahdenne**, Associate Professor of Pediatrics at Helsinki University Hospital, who led the operational design of the hospital.

Families are greeted in the lobby by an inter-



Matti Snellman / HUS

active wall with a sea life environment, for which children are invited to draw new fish. Graphics and Moomin characters decorate walls with curiosity-arousing quotes from the Moomin tales. Artworks, donated by foundations, are found throughout the public areas. Play is used to support healing.

Digital innovations improve service to families, but they also contribute to patient wellbeing: every room in the ward is equipped with a tablet that the child can use to control the TV, make video calls to loved-ones and even change the colour of the room lighting. "The interface was designed with active engagement of children, as part of the service design process in the operational design of the hospital," Lahdenne says.

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Helsinki News is an international bulletin published by the City of Helsinki Executive Office's Communications Unit three times a year.

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