

digital futures

Anna Kiefer, Chief Operating Officer

22 March 2023

Digital Futures inauguration October 1, 2020



Shaping a sustainable society through digital transformation

2022: >200 research groups engaging in one of Europe's largest research centres in the sciences for digital transformation

Founded jointly by KTH, SU and RISE



Yearly conference Digitalize in Sthlm

Empower People

Foster innovation, education, leadership and entrepreneurial spirit



Excel in Research

Create an international breeding ground for pioneering, cross-disciplinary research on digital technologies



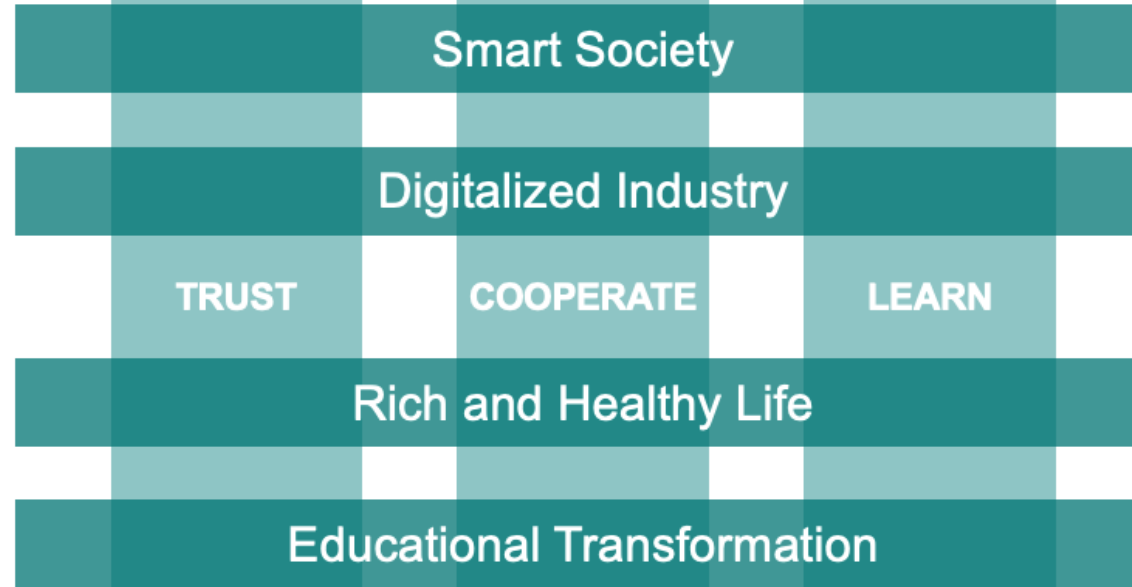
Build Community

Develop collaboration between academia, industry and public sector.

World class research programme for digital transformation

>100 RESEARCH PROJECTS

- 9 Collaborative research
- 13 Digital Futures fellows
- 14 Research pairs
- 9 C3.ai DTI projects
- 15 Demonstrator projects
- 4 Diversity & Inclusion
- 8 Partner projects
- 33 international postdocs
- 4 Seed projects
- 19 Scholars-in-residence



Future DigiLeaders



digital futures

Strategic physical and virtual presence



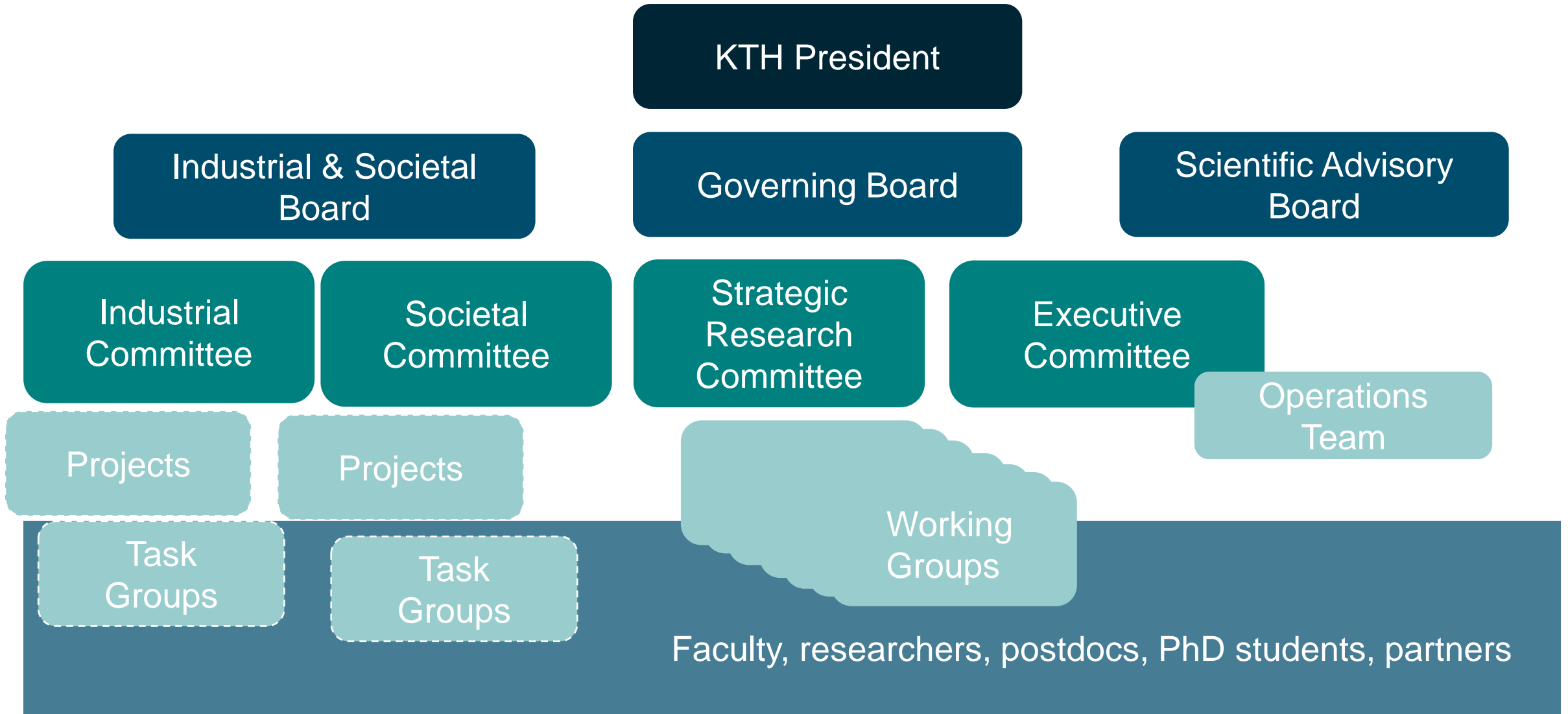
Digital Futures for Later Life



International postdocs

Talent scouting

Digital Futures organisation



Digital Futures Partnership Programme

Digital Futures partnership programme

- **The formation of an eco-system** through which partners **identify cutting-edge challenges, strategies and approaches.**
- **Strategic funding of joint research activities** addressing upcoming challenges in industrial and/or societal settings.
- The further **strengthening of the Stockholm region, as world-leading innovation hub** in digital transformation.
- The **strengthening of partners** through continuous exchange with ongoing research activities within Digital Futures.

Societal Committee focus areas – identified by partners

**Connecting
innovation to
procurement**



**Health and care
independent of
location**



Photo by [Vista](#) on [Unsplash](#)

**Future
communication
and logistics
systems**



Photo by [Ameen Fahmy](#) on [Unsplash](#)

**Climate-
positive urban
expansion**



Photo by [National Cancer Institute](#) on [Unsplash](#)



Partner Project Portfolio

- **Deep Camera-Based Movement Analysis for Remote Rehabilitation and Physical Therapy.** Partners: Region Stockholm, Danderyd hospital, Telia and KTH.
- **Environmental impacts of digitalization based on Life Cycle Assessment, two industrial postdocs.** Partners: Ericsson and KTH.
- **GEO-based Multi-layer Environmental Modelling of Urban TRAffIC.** Partners: City of Stockholm, Kista Science City and KTH.
- **New Chip Architectures for Industrial Vision.** Partners: Atlas Copco and KTH
- **Perceptive Dependable Cellular Networks for Road Transport.** Partners: Ericsson, Scania and KTH.
- **Sensing Safety Perception in Kista.** Partners: City of Stockholm, Kista Science Center, Gehl Architects and KTH.



Partner Project Portfolio

- **System support for online rehabilitation of Covid-19 patients.** Partners: Region Stockholm, Danderyd hospital, Telia, Visuera Integration AB and SU
- **Towards Safe Smart Construction: Algorithms, Digital Twins and Infrastructures.** Partners: Ericsson, Skanska, KTH
- **Data-driven improvement of work-flows at the Karolinska University Hospital**
Partners: Region Stockholm/Karolinska University Hospital, KTH
- **Smart Predictive Maintenance for Pharmaceutical Industry (SMART)** Partners: Astra Zeneca, KTH
- **Explainable Machine Learning for Development of Early Warning Systems, (EMERDENSY)** Partners: Region Stockholm/Karolinska University Hospital, KTH

GEO-based Multi-layer Environmental Modelling of Urban TRaffIC

KTH
RISE
City of Stockholm
Kista Science City
Edeva



Researcher
Romain
Rumpler



Prof Jonas
Mårtensson



Associate Prof
Gyözö Gidofalvi

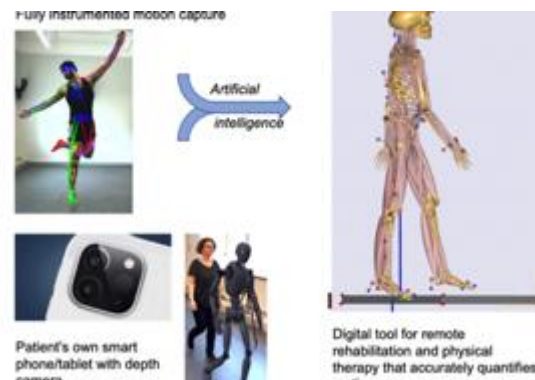
- The vision is to establish a framework enabling dynamically optimized traffic control to reduce the negative impact of transport in dense urban areas, (congestion or pollutant and noise emissions).
- State-of-the-art research will be demonstrated aiming at real-time representation of traffic and associated environmental stressors in dense urban environments.
- A multipurpose sensor network will be deployed in the pilot “innovation zone” defined by the City of Stockholm.

Deep Camera-Based Movement Analysis for Remote Rehabilitation and Physical Therapy

KTH
Region Stockholm
Danderyd hospital
Telia



Prof. Lanie Gutierrez,, KTH



- A digital tool is created for remote physical therapy and rehabilitation that accurately measures a person's movement patterns and quality.
- The depth cameras and processors installed on the latest smartphones and tablets are used to analyse changes in movement quality over time.
- The tool will also accommodate live feedback and interaction with a therapist.

Utmaningar i samverkan



Olika sätt att angripa en utmaning i triple-helix-samverkan



Komma till konkreta projekt



Olika syn på tid



Olika förväntningar på vad som ska levereras



Engagera fler delar av organisationen

Bevekelsegrunder



Profilera staden/regionen som innovationshub och attrahera talanger



Uppfylla mål om samverkan med akademi och näringsliv, triple-helix.



Tillgång till forskningsresurser som kan adressera komplexa samhällsutmaningar.

Framgångsfaktorer



Bygga relationer. Lyhördhet
olikheter och intressen



Tydliga spelregler

Testa olika metoder för
brainstorming och
matchmaking.

Acceptera att det inte finns
en perfekt lösning, men
flera olika parallella
aktiviteter genererar
resultat på olika ledder.



Konkreta
projekt att
samarbeta
kring



Strukturerad
organisation.
Investering i
tid, pengar och
engagemang
från alla
inblandade
parter



Möjligheter

- Bygga ökad välfärd, tillväxt och internationell konkurrenskraft.
- För att adressera komplexa samhällsutmaningar krävs tvärvetenskaplig och sektoröverskridande samverkan.
- När man lyckas överbrygga sina klyftor kan man uppnå hållbara resultat som gagnar alla parter och hela samhället.
- Ökad förståelse för varandras verkligheter.
- Kombinera olika perspektiv och kunskaper för att uppnå största möjliga gemensamma nytta.

**Dissemination,
events and
workshops**



Open Research Days 20-21 April 2023

2 days filled with presentations of Digital Futures project results for ISPP partners and Digital Futures faculty

Special session 11am-1pm, 21 April:

- Welcoming of AstraZeneca, Saab and Xylem
- Panel on digital advancement with representatives from all partners
- Partner project presentations

The background of the slide is a photograph of a stage. Large, three-dimensional red letters spelling 'TEDx' are the central focus. A spotlight illuminates a circular area on the dark stage floor in front of the letters. The background is dark with some blue and red lighting accents.

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TEDxDigital Futures 2023

- Application to be submitted early 2023
- First event preliminarily scheduled in September 2023
- Top speakers and arrangement
- Digital Futures partner engagements

Day 1 Tuesday 17 Oct

Future Digileaders

Hybrid

Participation by registration / or application

Chair: Qianwen Xu, KTH



Day 3 Thursday 19 Oct

Digitalize in Sthlm 2023

Hybrid

On-line + In-person program

Program Chairs: Aristides Gionis, KTH and Airi Lampinen, SU

DON'T
WASTE
YOUR
TALENTS



Day 2 Wednesday 18 Oct

Digitalize in Sthlm 2023

Hybrid

On-line + In-person program

Program Chairs: Aristides Gionis, KTH and Airi Lampinen, SU



Day 4 Friday 20 Oct

Sthlm Talents

Hybrid & Onsite

Participation by registration

Stay tuned...

- Newsletter: <https://www.digitalfutures.kth.se/newsletter/>
- Seminar invitations: <https://www.digitalfutures.kth.se/events/>

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PARTNERS



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SE

