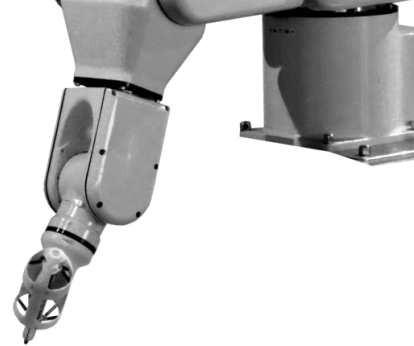


Mitä jos Suomi satsaisi kestävän tulevaisuuden teknologioihin?

Työpaja Kestävän tulevaisuuden radikaalit teknologiat

Finnsight 28.10.2019 klo 13.15-15



VTT

Luke
LUONNONVARAKESKUS

SITRA

OHJELMA

13.15-13.40

YK:n kestävän kehityksen tavoitteet ja kestävän kehityksen teknologiat

13.40-13.50

Skenaariotyö alulle: Mihin teknologiaan Suomen kannattaisi panostaa, jotta saavutettaisiin kestävä teollisuus, infrastruktuuri ja innovaatiot?

13.50-14.45

Mitä valittuun teknologiaan panostaminen tarkoittaisi talouden, yhteiskunnan ja ympäristön näkökulmasta?

14.45-15.00

Yhteenveto: Mitä jos Suomi panostaisi...?

15.00

Työpaja päättyy

Tarkoituksena tulkita teknologioiden merkitystä ja mahdollisuuksia

Pohdimme sitä, **mitä yhteiskunnassamme, taloudessa ja ympäristössä voisi/pitäisi tapahtua**, jos kestävä teollisuuden, infrastruktuurin ja innovaatioiden tavoitteeseen vastataan valitsemallamme teknologialla.

Työpaja on yksi tilaisuus, jossa **mallinamme** tapaa, jolla kestävä kehityksen teknologioita tunnistetaan ja tulkitaan. Niinpä tarkoituksena on myös **oppia**, miten kestävä kehityksen teknologioita voidaan pohtia yhdessä eri ryhmien osaamista hyödyntäen.

Tässä työpajassa toimintamallia kokeillaan **tavoitteen 9** kautta.

Työpajan tuotoksena syntyy

skenaario siitä, miltä Suomi näyttää, jos päätämme vastata YK:n kestävän kehityksen tavoitteeseen 9 Kestävä teollisuus, infrastruktuuri ja innovaatiot valitsemamme teknologiaan panostamalla.

Agenda 2030 and Sustainable Development Goals (SDGs)

- Agenda 2030 was approved in the UN General assembly in 2015
 - 17 goals; 169 subgoals
 - 250 indicators
- UN Statistical Commission approved in 2017
- SDGs on the agenda in other international organisations e.g. OECD and EU level.
- Many countries have national SDG policies
 - And corporate interest is also high: how to make SDG sound business?
- In Finland, Agenda 2030 integrated into national policy goals. Also new national indicators have been defined in 2017
- National SDG indicator portal has been published 02/2019



Miten saavuttaa kestävä kehityksen tavoitteet teknologioita hyödyntäen



FRAMEWORK

PROCESS

SUSTAINABLE
DEVELOPMENT GOALS
(SDG)



MULTICRITERIA IMPACT
ASSESSMENT

LINKING SDG GOALS TO
TECHNOLOGIES

CROWDSOURCING
EXPERTS AND CITIZENS

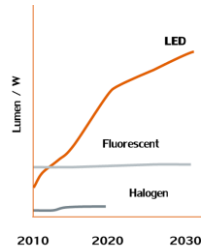
QUALITATIVE AND
QUANTITATIVE SCENARIO
WORK, MODELLING

BASELINE AND WEAK
SIGNAL DETECTION USING
DATA ANALYTICS AND
ARTIFICIAL INTELLIGENCE

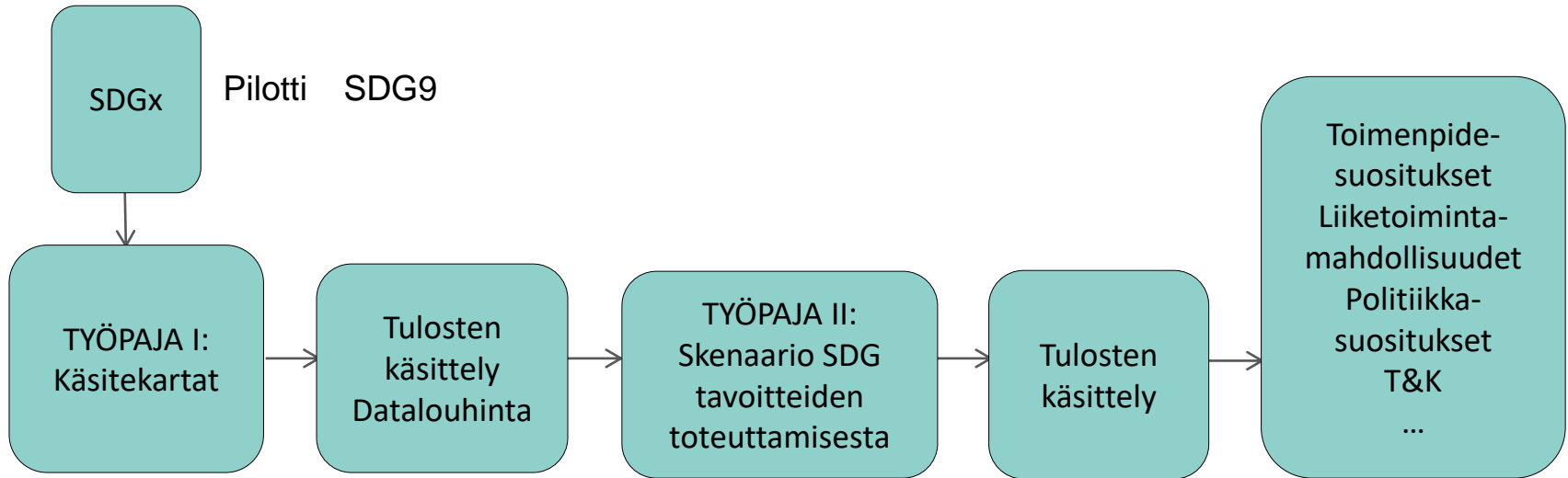
LINKING
TECHNOLOGIES TO
CONCRETE
APPLICATIONS



UNDERSTANDING
GENERAL PURPOSE
TECHNOLOGIES &
EMERGENCE OF
NOVELTIES



KeKeTe-prosessin luonnos – pilotti SDG9



Ministeriöiden
Suunnannäyttäjät
6.9.2019

Kysymys VTT:n
asiantuntijoille

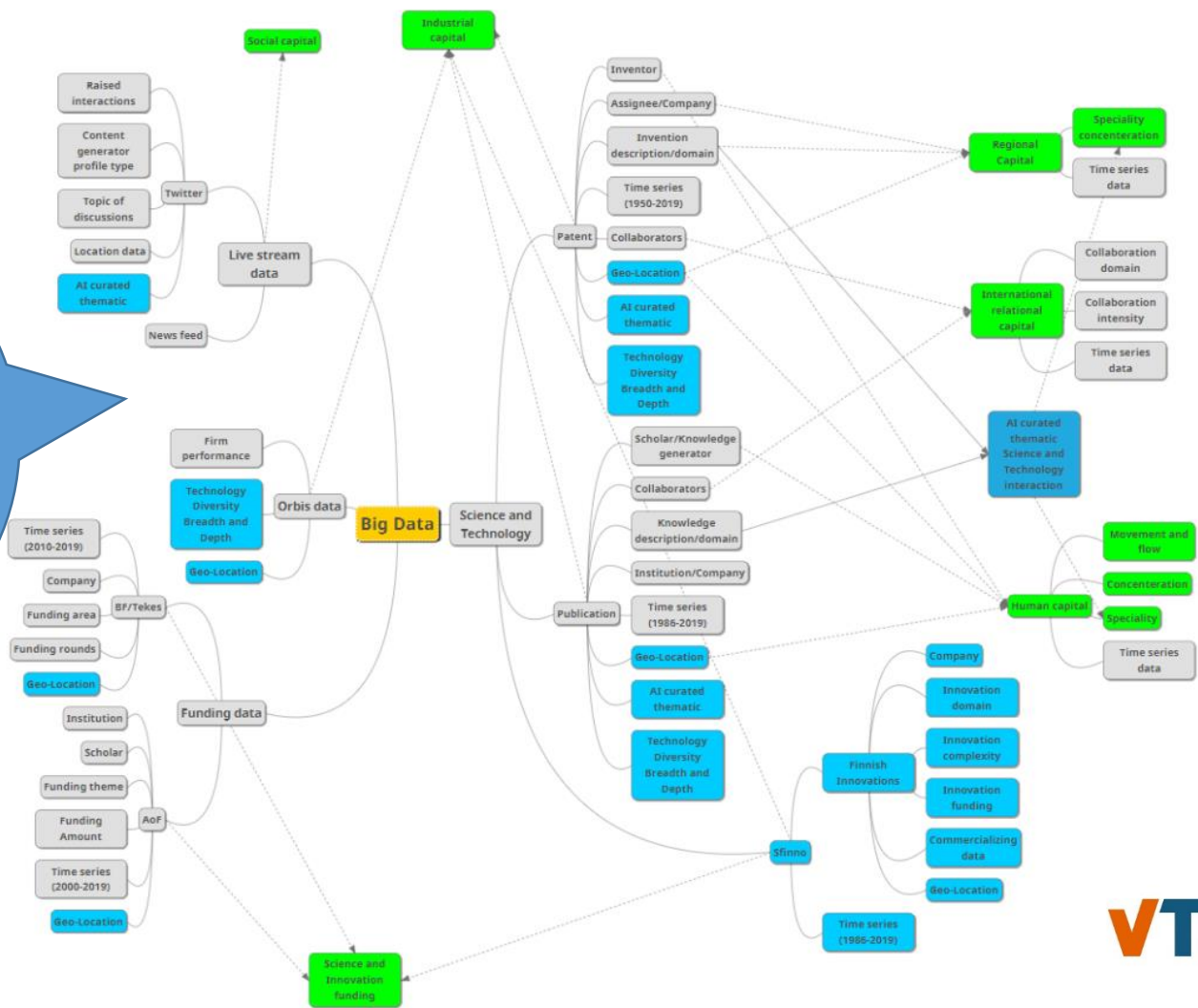
Finnsight2019
Skenaario:
Mitä jos Suomi panostaisi?

Datan lähteitä

Tietokannat

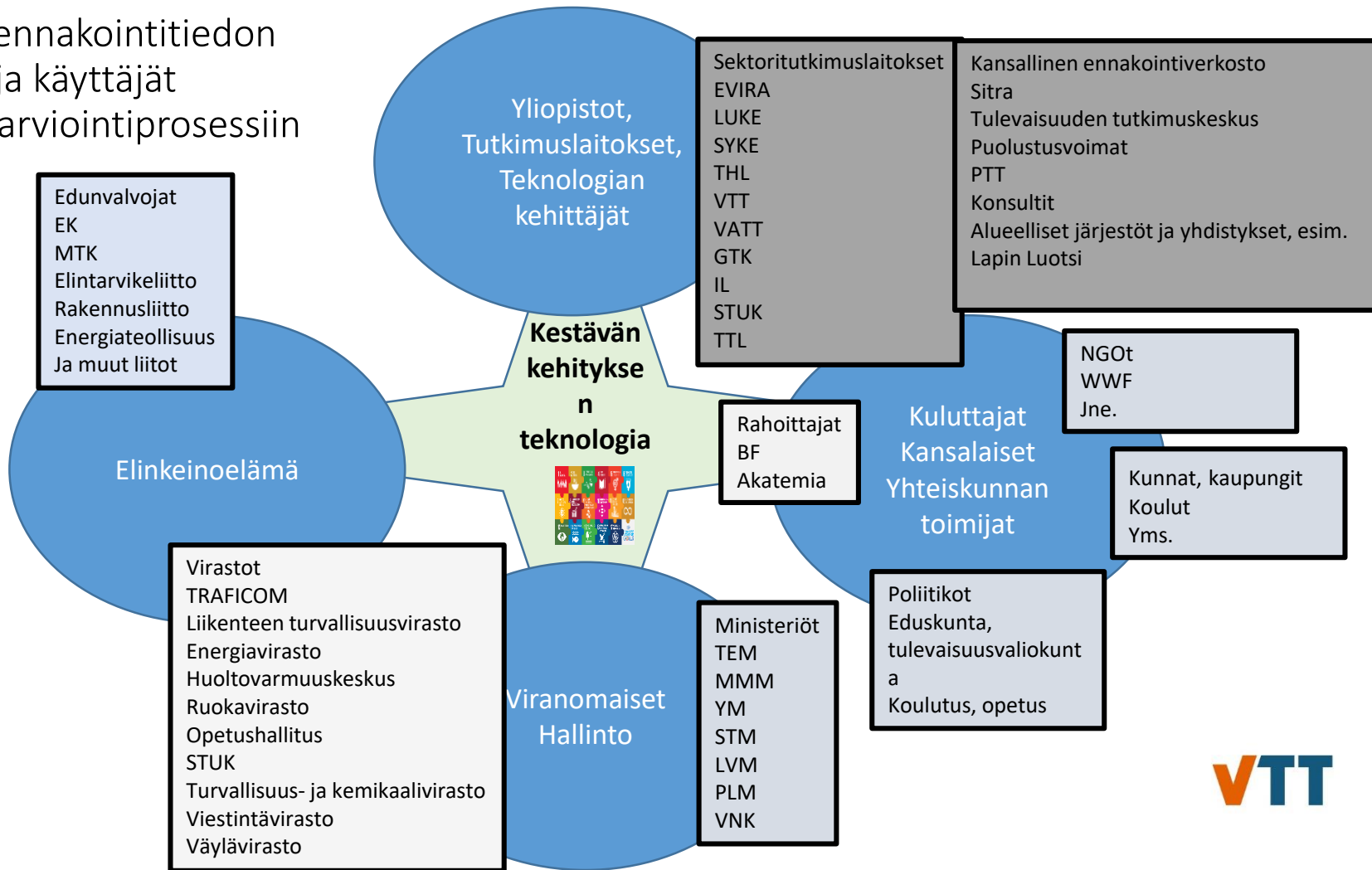
- Patentit
- Julkaisut
- Rahoitushakemukset

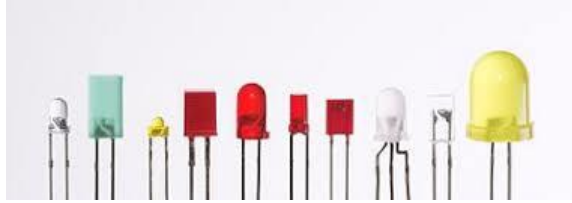
...
SOME
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Toimijat: ennakoitiedon tuottajat ja käyttäjät

-Mukaan arviointiprosessiin

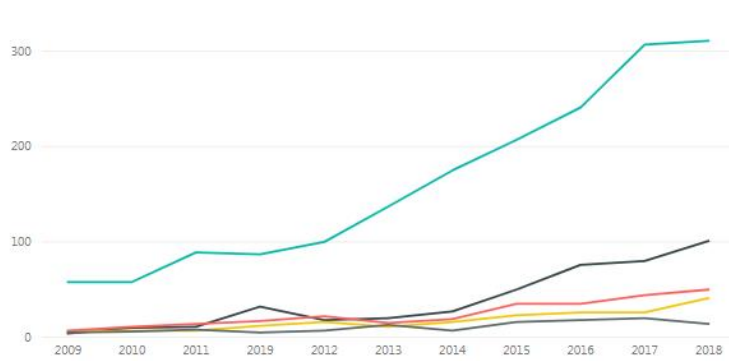




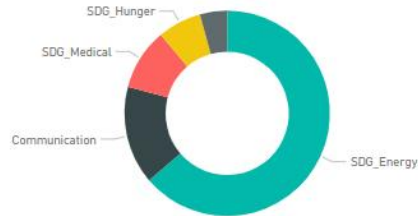
SDG Related Topics Analysis

Topics Trends Over The Years

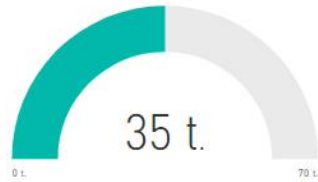
SDG related clusters ● Communication ● SDG_Energy ● SDG_Hunger ● SDG_Medical ● SDG_Water



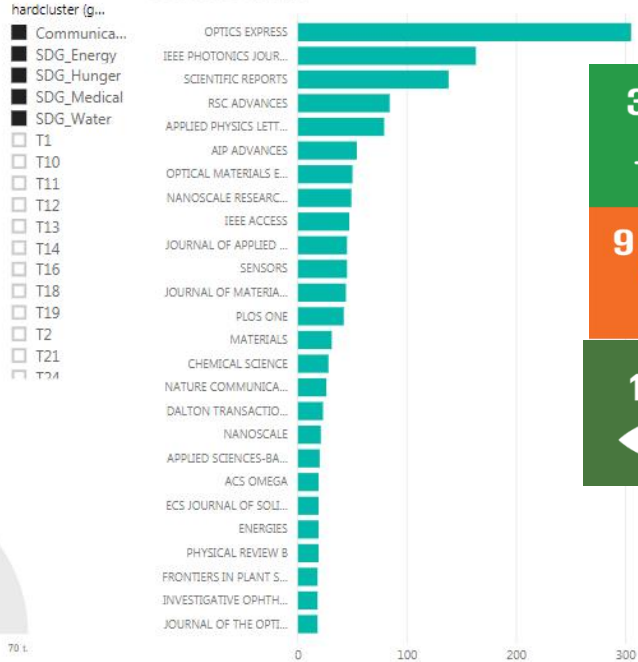
Count of Topics Proportionally



Times Cited



Source of Publication



SDG 9 Targets

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets

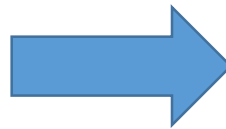
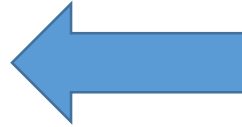
9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.A Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States 18

9.B Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020



9.1 Infran saavutettavuus

9.2 Kestävä teollistuminen

9.3 PK-yritykset

9.4 Infrastruktuurin ja teollisuuden uudistaminen niin, että resurssitehokkuus, puhdas ja ympäristöystävällinen teknologia otetaan käyttöön

9.5 Tutkimus

Indicators

Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.1.1

Proportion of the rural population who live within 2 km of an all-season road

9.1.2

Passenger and freight volumes, by mode of transport

9.2

Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

9.2.1

Manufacturing value added as a proportion of GDP and per capita

9.2.2

Manufacturing employment as a proportion of total employment

9.3

Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, markets

9.3.1

Proportion of small-scale industries in total industry value added

9.3.2

Proportion of small-scale industries with a loan or line of credit

9.4

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased adoption of clean technologies and industrial processes, with all countries taking action in accordance with the Paris Agreement

9.4.1

CO2 emission per unit of value added

9.5

Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.5.1

Research and development expenditure as a proportion of GDP

9.5.2

Researchers (in full-time equivalent) per million inhabitants

9.A

Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

9.A.1

Total official international support (official development assistance plus other official flows) to infrastructure

9.B

Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

9.B.1

Proportion of medium and high-tech industry value added in total value added

9.C

Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

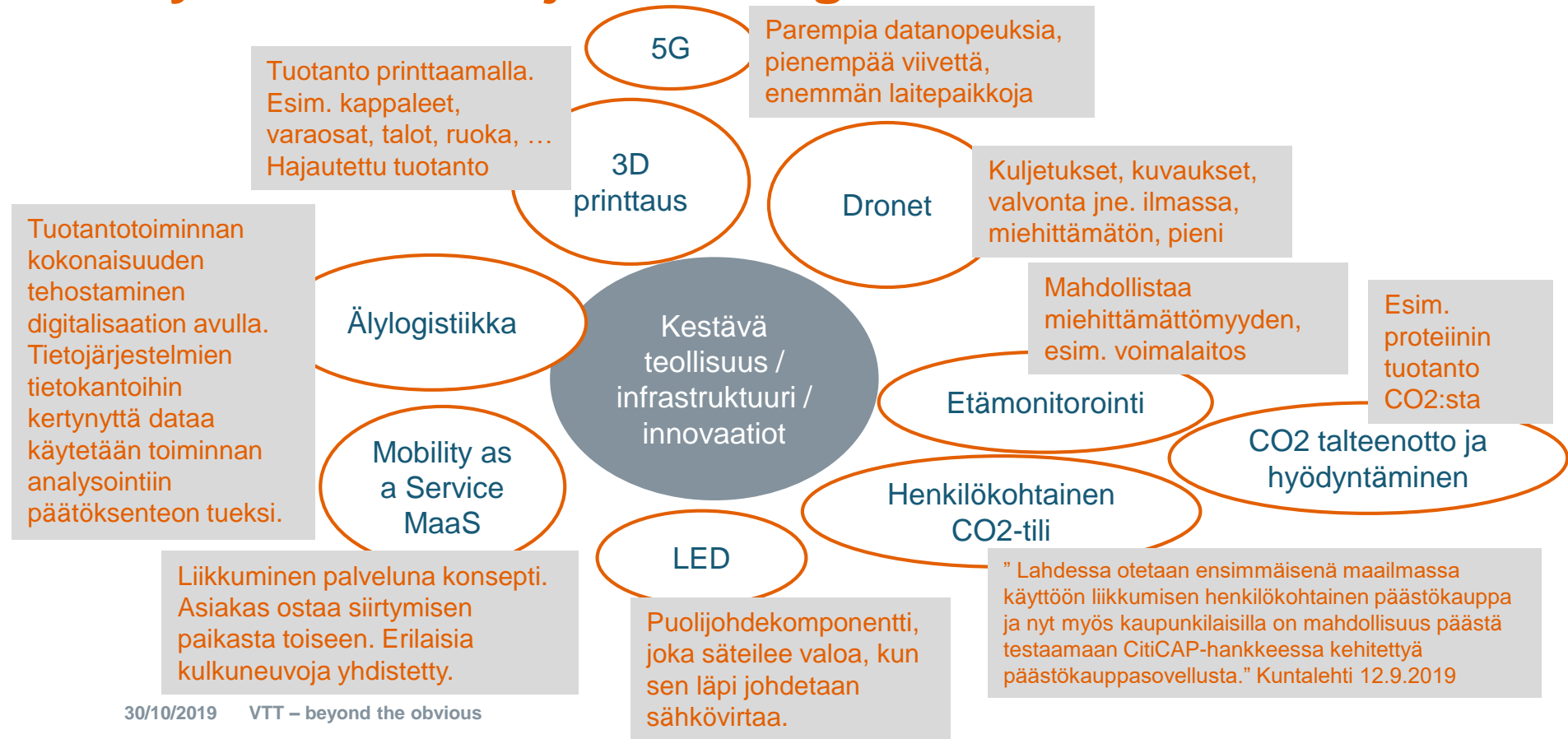
9.C.1

Proportion of population covered by a mobile network, by technology

Rural population
Inclusive and sustainable industrialisation
Small-scale industries
CO2 emissions per unit of value added
Research and development in GDP

Kestävä teollisuus/infrastruktuuri/innovaatiot

Kehittyviä radikaaleja teknologioita



Näin rakennamme skenaariota

1. Keskustelemme ja kirjaamme ajatuksiamme Mentimeterin avulla ylös.
2. Aloitamme valitsemalla teknologian, joka vaikuttaa kiinnostavimmalta juuri nyt vastaamisessa YK:n kestävän kehityksen tavoitteeseen 9.
3. Teknologian jälkeen pohdimme, mitä siihen panostaminen tarkoittaisi Suomessa. Katsomme muutoksia kolmesta eri näkökulmasta: talouden, yhteiskunnan ja ympäristön.
4. Voit kirjoittaa ajatuksiasi missä tahansa vaiheessa ylös Mentimeteriin, osoitteessa [menti.com](https://www.menti.com). Kerromme kuitenkin, milloin siihen on erityisen hyvä hetki.

A grayscale image of a hand holding a white smartphone. The phone's screen is black with the word "Mentimeter" in blue text. At the bottom of the screen, there are three white icons: a list icon, a home icon, and a back icon.

Mentimeter

**Siirry
osoitteeseen
menti.com**