



Digital

# Digital Technologies and the Green Economy

A Makers & Shapers report

*Prof. Willem Jonker, CEO EIT Digital*



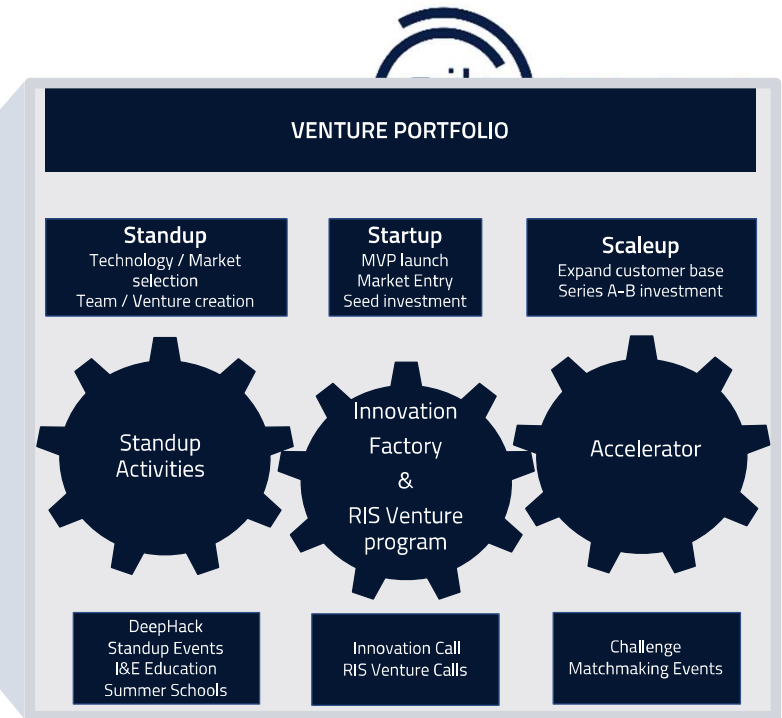
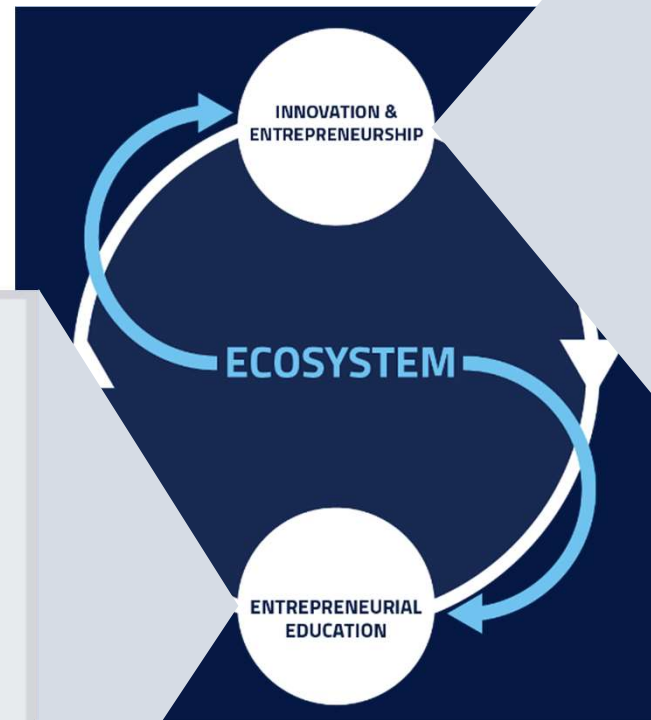
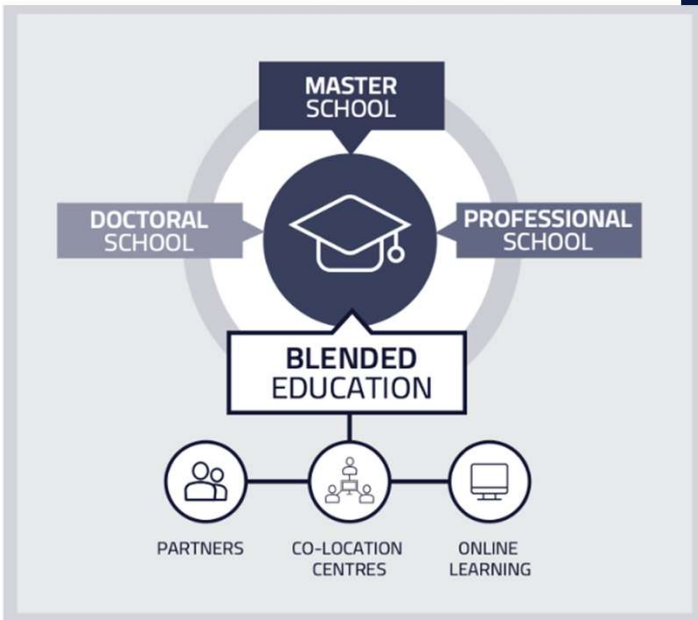
**Green Telecom Workshop**

March 02<sup>nd</sup>, 2022



# The EIT Digital strategy

INTEGRATED | MULTI-DISCIPLINARY | CROSS-COUNTRY



# Ecosystem highlights



Co-funded by the  
European Union



EIF and EIT Digital team up to  
close digital skills gap in Europe



EIT Digital Satellite opened in Tallinn



EIT Digital Conference 2021



Systematic & structural  
cooperation' EIC / EIT



Teaming up with DG Connect  
on Digital Innovation Hubs & Skills



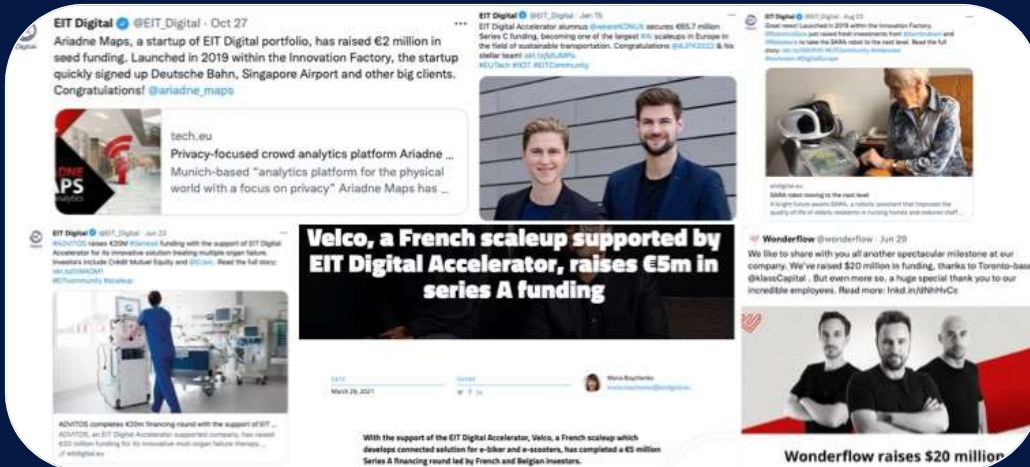
High profile digital leaders in Makers & Shapers 2021





# Innovation & Education highlights

All time high fundraising by EIT Digital supported startups & scaleups



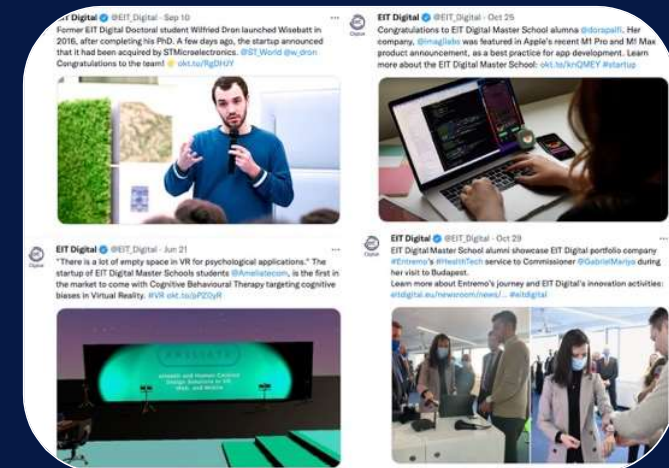
Continuous high mobilization of Europe's startup, startup and scaleup community



Despite COVID-19, strong student enrolment in EIT Digital Schools



EIT Digital education alumni venture successes



# Summary



Analyses the potential of digital technologies to achieve green growth in Europe.

- can Europe's accelerated digital transformation help to reduce non-green energy use, or
- will increasing digitalisation of business and industry on the contrary enhance consumption of non-green energy in the overall economy?

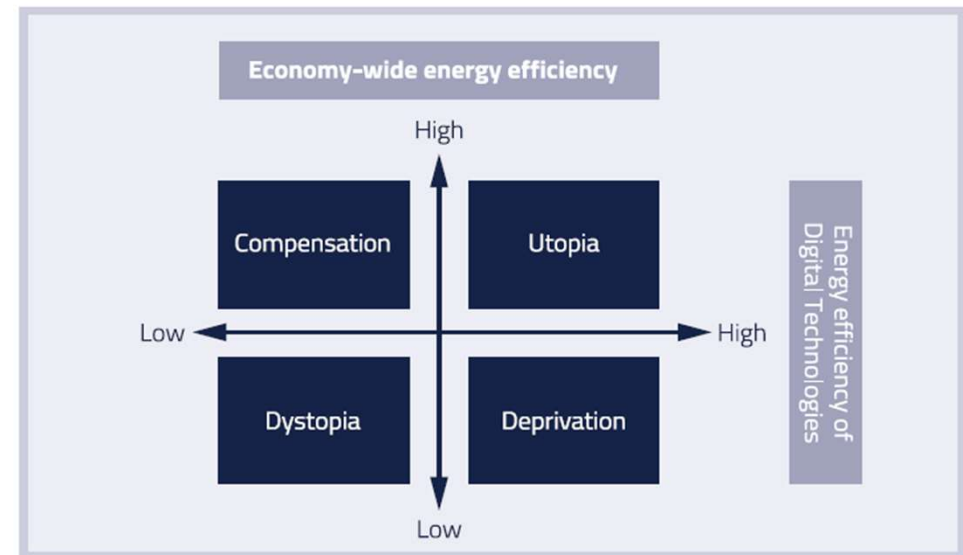
This report discusses opposing angles and opinions and presents policymakers with scenarios that support their decisions on regulatory frameworks leading towards a sustainable digital future.



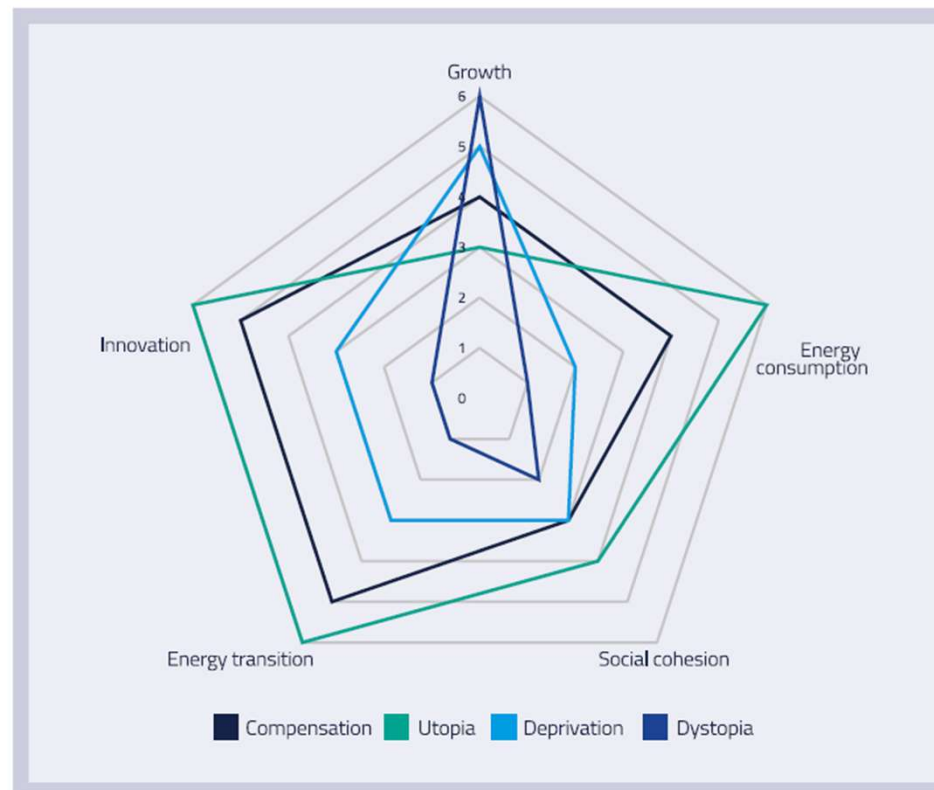
[eitdigital.eu/our-messages/makers-shapers/reports/](https://eitdigital.eu/our-messages/makers-shapers/reports/)

## 4 Scenarios

- **Compensation:** low energy efficiency in digital technologies sector is compensated by high energy efficiency in all other sectors, also thanks to the use of digital technology solutions;
- **Utopia:** high energy efficiency of digital technologies is taken up in the overall economy to reduce energy use;
- **Dystopia:** low energy efficiency of digital technologies combined with low energy efficiency in other sectors;
- **Deprivation:** the digital sector has high energy efficiency, yet other sectors are deprived from using it.



# Assessment



[eitdigital.eu/our-messages/makers-shapers/reports/](https://eitdigital.eu/our-messages/makers-shapers/reports/)



# Conclusions

1. The lack of an agreed framework of measuring and modelling digital impact on energy consumption in various sectors leads to many opposing views. To have a fact-based discussion, an agreed framework should be put in place based on international standards to model and quantify the impact of digital technology on energy consumption in various economy sectors.
2. Although a reduction of energy consumption of digital technologies as such is relevant and should be pursued, this energy consumption is less than 10% of the total energy consumption.
3. The impact of the application of digital technology on energy consumption varies strongly across economic sectors. Therefore, the focus should be on those sectors where the potential gain is high. For example, the COVID pandemic showed that moving physical meetings online leads to significantly less travel resulting in substantially reduced energy consumption.
4. When applying digital technology in specific sectors, attention must be paid to possible rebound effects, whereby the energy savings achieved in one domain are offset by reuse of energy in another domain. These are linked to both behavioural (i.e., consumers' substitution waves) and structural factors (i.e., energy output elasticity of certain sectors) that can be contained only through strong interventions such as taxation and incentives.