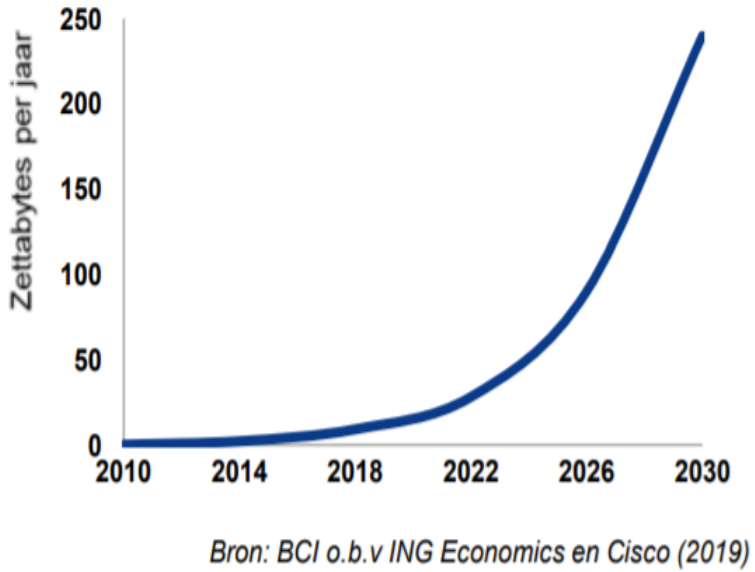
LEAP

"Joining forces to take a leap forward"

NEA, Frank Hartkamp

November 25, 2021 CA EED Workshop on Datacenters and Energy Efficiency Brussels

The future is digital



Bron: BCI o.b.v ING Economics en Cisco (2019)

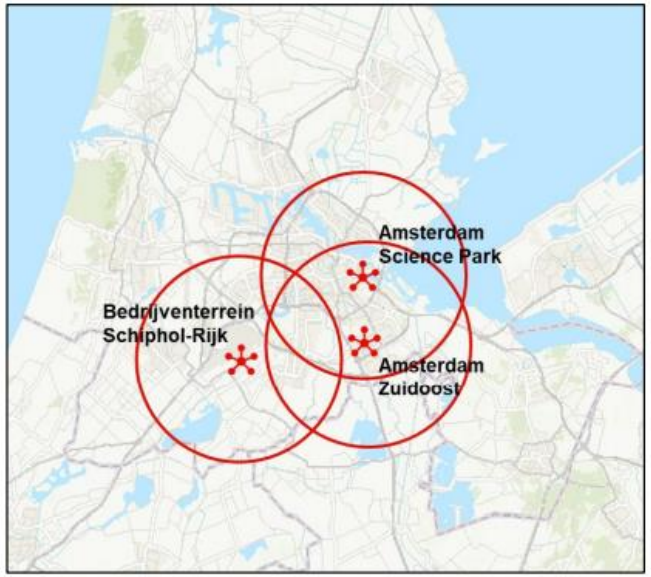
Sustainability is part of everyones agenda

COP21·CMP11
PARIS2015
UN CLIMATE CHANGE CONFERENCE

Klimaat-akkoord

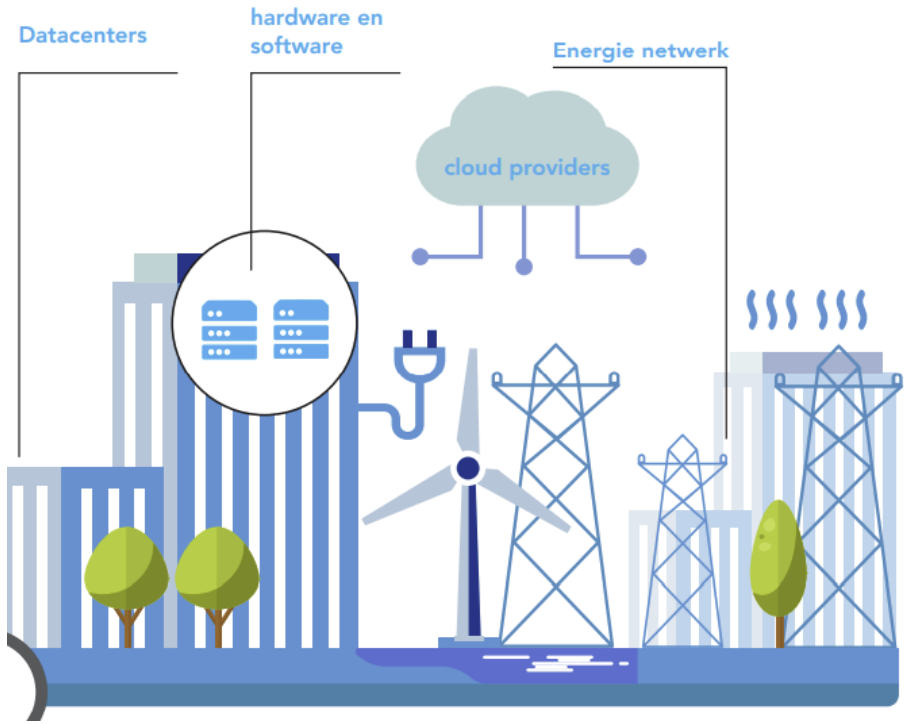
The Metropolitan Region of Amsterdam is one of the key datacentre hubs

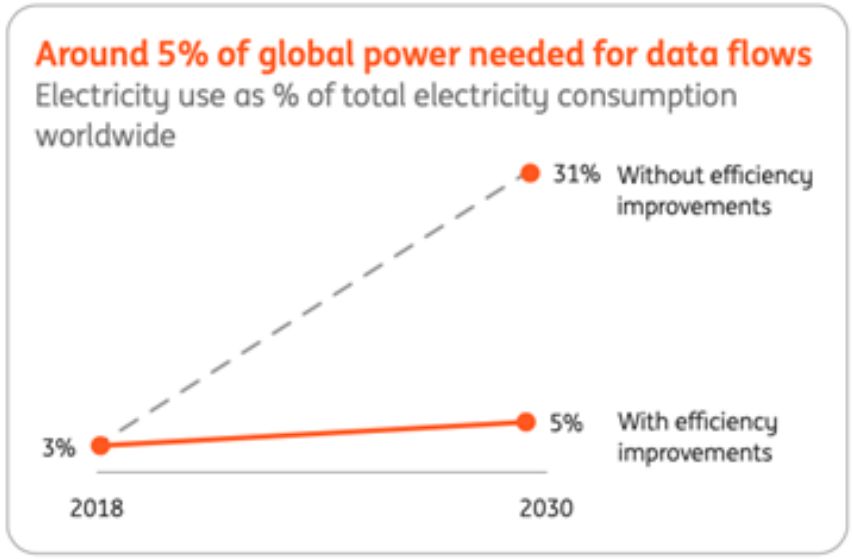
Figuur 8: Hyperconnectiviteit in Nederland



Bron: BCI, 2019

Digital is physical…





Source: ING Economics Department based on BNEF

… and impacts use of energy, space, water- and material

Challenge

How do we accelerate the transition to a **sustainable digital infrastructure** for future generation of datacenters in which we integrate innovative (technological) developments at the heart of the **energy system** and provide a solution for **spatial planning** with **circular use of materials**?

LEAP

- Based on the need to develop new public-private partnerships in the data center sector to envision and develop sustainable digital infrastructures for the future

- LEAP intents to built a platform for collaboration, knowledge sharing and communication

- LEAP aims to make a positive contribution to a green and smart society where growth, environment, people and society go hand in hand; in an energy efficient way while preserving critical materials.

LEAP Coalition

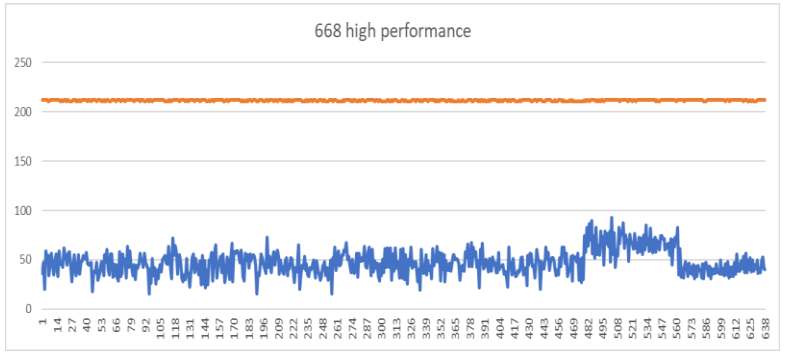
- Business end users
- Hardware and software suppliers
- Data centers
- Central government and municipalities
- Grid operators
- Knowledge institutions
- Industry and network organizations

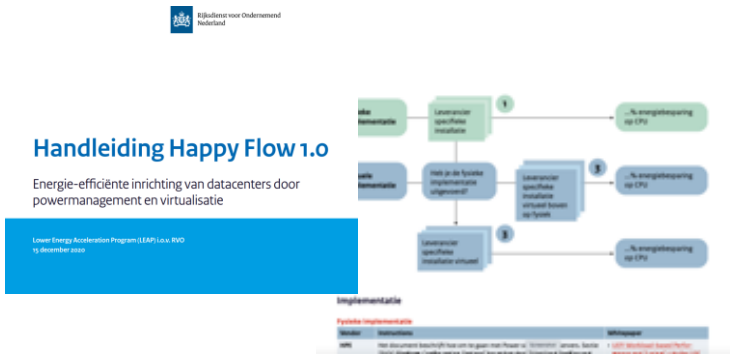
LEAP coalition = a platform for collaboration

- Alliander
- AmecBoard
- Municipailty of Amsterdam
- NLdigital
- RVO
- Topsector Energy

First project: LEAP Eco-modus

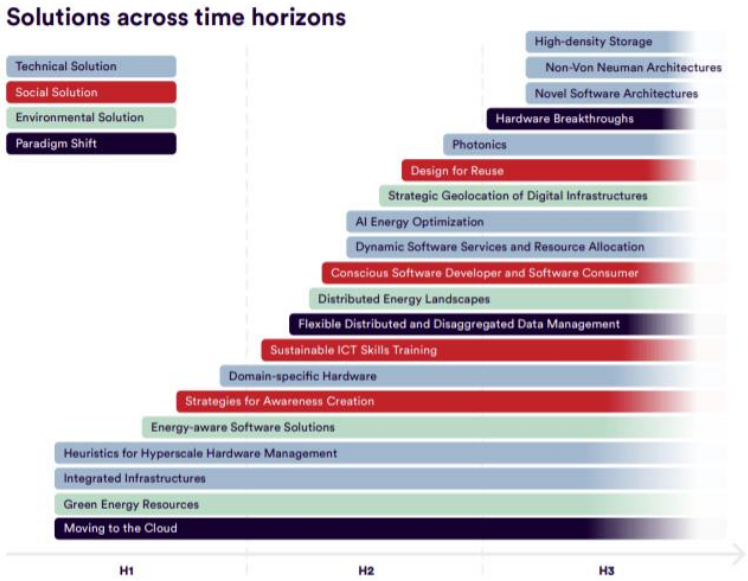
- Pilots: low-power mode 10 percent less energy consumption
  - No performance loss observed
- Knowledge and behavioral change are key to better use of eco-mode and virtualization
  - Best practices
  - Happy Flow manual
  - Masterclasses
- Currently: embedding in policy and regulations in collaboration with the data center sector

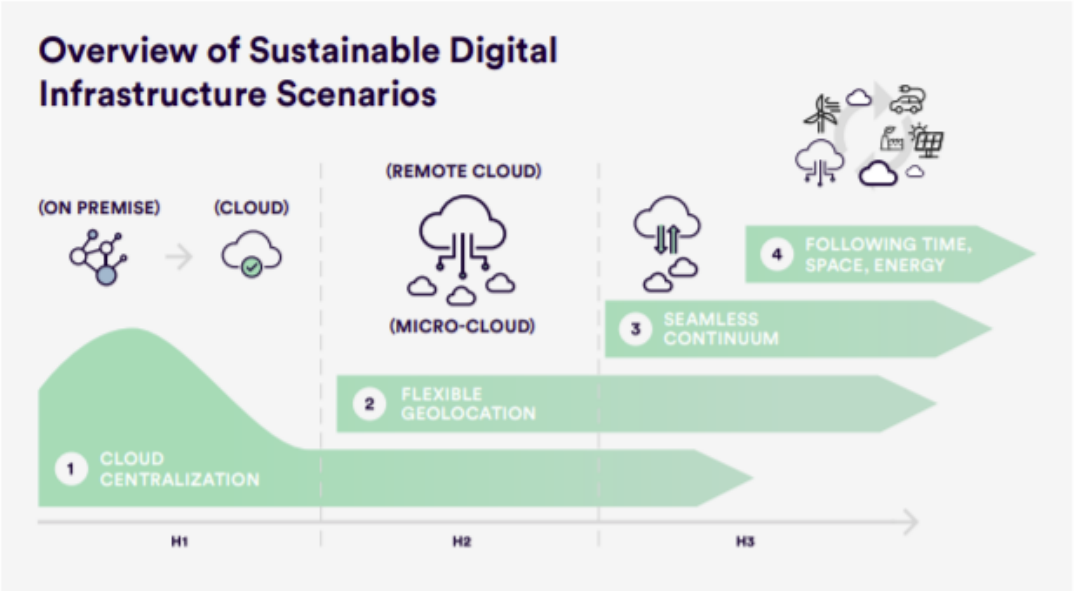




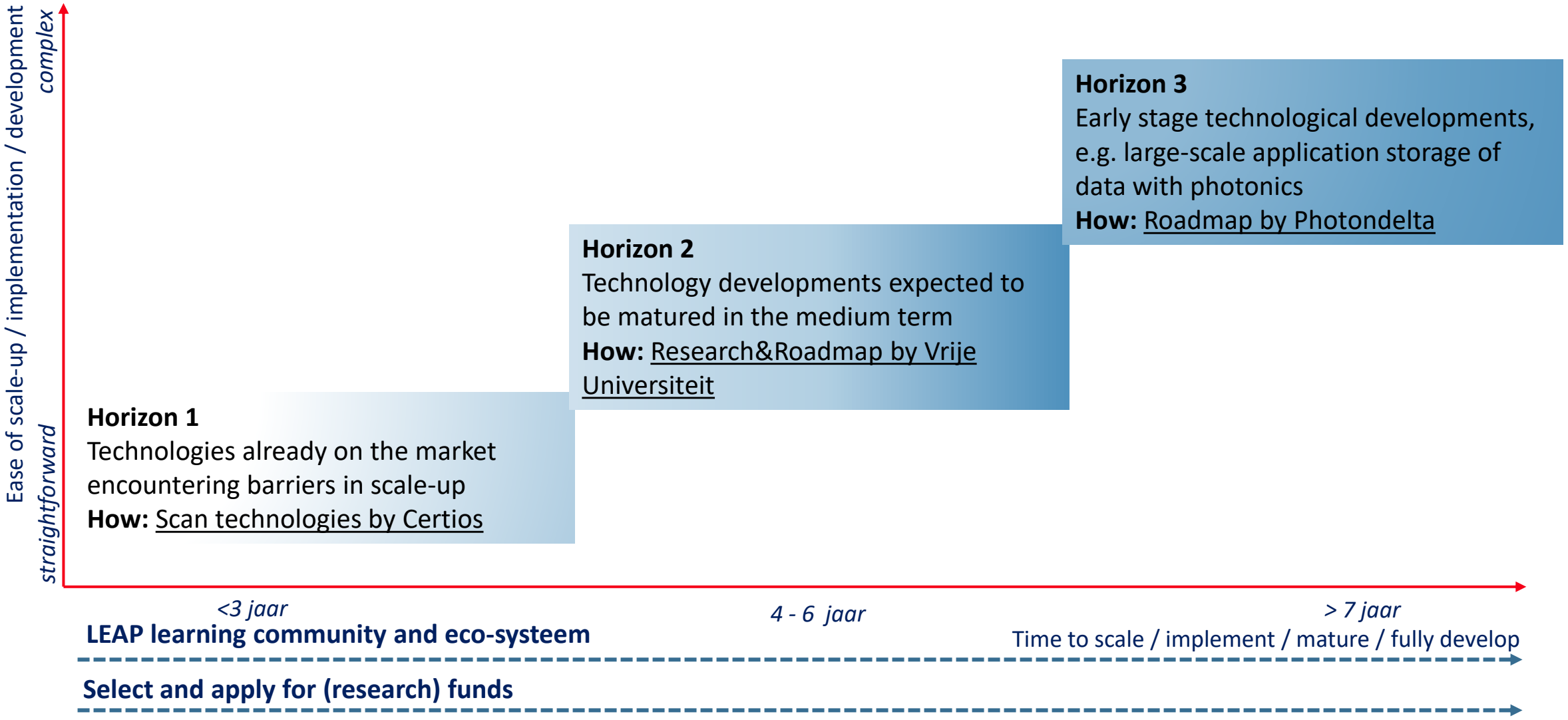
Trends & Scenario Landscape

https://amsterdameconomicboard.com/en/news/leap-technology-landscape-trends-and-scenarios





Three horizon's in the Trends & Scenario Landscape



Next steps: developing collaborations across 3 themes

Horizon 1 | Horizon 2 | Horizon 3

Technology - *becoming more energy-efficient with four soft- and hardware related topics*

Distributed - *developing a more distributed, flexible, energy aware, smart system with four distinct topics*

Circular - *ICT infrastructure with energy and circularity integrally connected*

Collaboration Platform – *a place for inspiration, awareness and knowledge sharing*

Prioritized topics on a collaboration platform

- Energy efficient software
- Efficient cooling techniques
- Accelerate adoption of photonics available today

- New business platform for distributed cloud services

- Circular Resource Planning for IT (RePlanIT)

- Learning community
- Network and eco-system
- Communication

Summary

- Increasing digitization ensures strong growth of the data centre sector and electricity demand
- Ever-expanding data centres are increasingly difficult to integrate into the energy and spatial system
- More intensive public-private partnership are needed
- LEAP is working on an eco-system with collaborations across 3 themes
- Together we can make the Netherlands and Europe the most innovative sustainable digital hub in the world

READ MORE?

General info
https://amsterdameconomicboard.com/en/initiative/leap-lower-energy-acceleration-program

LEAP Technology Landscape
https://amsterdameconomicboard.com/en/news/leap-technology-landscape-trends-and-scenarios

LEAP Infographic
https://amsterdameconomicboard.com/en/news/innovations-needed-for-transition-to-sustainable-digital-infrastructure

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