

Hej!

**Let's work together and pioneer the possible
through collaboration and innovation.**

A dramatic, blue-tinted landscape featuring a long, straight road that stretches into the distance. The sky is filled with heavy, dark clouds, with some light breaking through, creating a moody and atmospheric scene. The road is flanked by low concrete walls and leads towards a horizon line. The overall color palette is dominated by various shades of blue and dark tones, giving it a futuristic and somewhat ominous feel.

The Future is





David Frum 

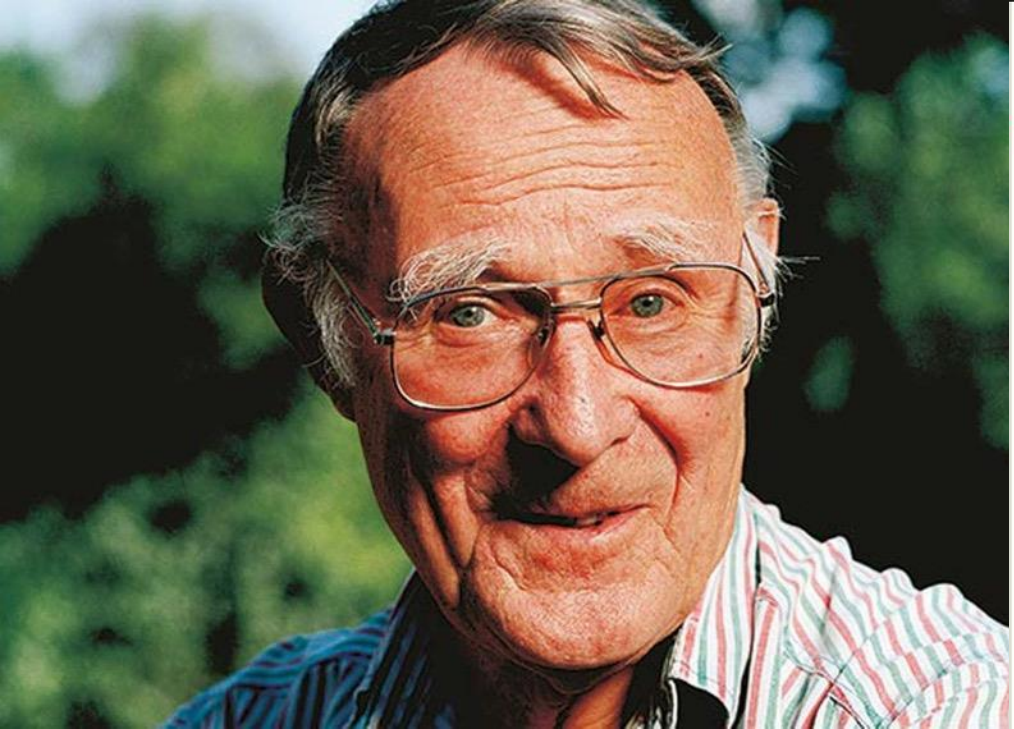
@davidfrum

Nature wants 5 of your 7 children dead. It wants you dead by 50. Everything better than that is brought to you by science & technology

2:37 PM · 10 Jan 17

6,266 Retweets **10.4K** Likes





AFTONBLADET

TORSDAG 27 JANUARI 2000

Jonas Birgersson på toppmöte med Clinton och Gates



Sveriges bredbandsapostel Jonas Birgersson, USA:s president Bill Clinton och Microsofts Bill Gates finns med bland de 2000 delegaterna vid ekonomiska toppmötet i Davos.

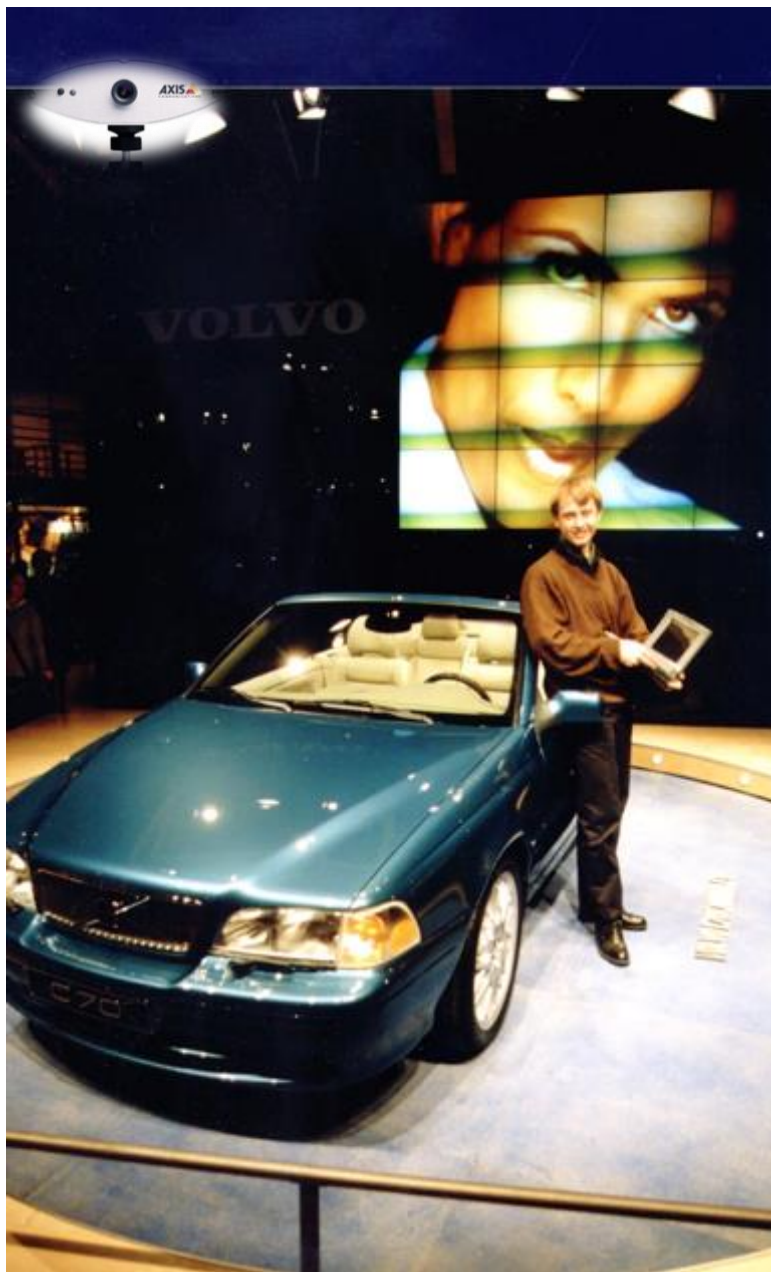
Svenske IT-gurur Jonas Birgersson ska delta i ekonomitoppmötet i schweiziska skidorten Davos, som börjar i dag.

Han är i fint sällskap. Bill Clinton, Tony Blair, Bill Gates, och Percy Barnevik ska också dit.


Jonas Birgersson, sveriges egen bredbandsprofet, ska delta i ekonomimötet i Davos.




FRAMFAB



We have created global standards before

← Tillbaka ? Hantering av personuppgifter  CO₂ NEDC-Korr: 131 g/km | WLTP: 155 g/km ∨



XC60

EXTERIÖR WWW.VOLVO.SE





Billån
ca 5 358 kr/mån | ca 363 900 kr Välj

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[Motor](#) [Växellåda & Drivning](#)

[Diesel](#) [Bensin](#) [Laddhybrid](#)

 D3 (150 hk) ✓ i	 D4 (190 hk) i	 D4 AWD (190 hk) Man i	 B4 AWD Aut (197 hk) - Mildhybrid i
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NYHET!
NATURUPPLEVELSE
TILL SALU.

11.685:-
Denna kombination exkl. ben
SULTAN SONGLI medelmjuk
resårbotten, 160x200cm **6.595:-**
SULTAN TORÖD bäddmadrass,
160x200 cm **3.345:-**
BEITSTAD huvudgavel B 160 cm
1.695:-

RÄNTEFRITT
DELA UPP BETALNINGEN
Denna kombination
1007:-/mån
i 12 månader

FÖLJ IKEA PÅ:

IKEA HANDLA HEMMA

- > Om IKEA HANDLA HEMMA
- > Näthandla steg för steg
- > Betalning & leverans
- > Betala din order

Välj varuhus

Välj ditt varuhus för öppettider, erbjudanden mm

Gävle

OK!

Just nu på bloggen
Sommarens underbara rum

Heminspiration

IKEA Restaurangen

DAGENS RÄTT

45:-

IKEA Restaurangen erbjuder prisvärd, nyttigt och god mat för dig som besöker våra varuhus.

[Läs mer om dagens rätt](#)

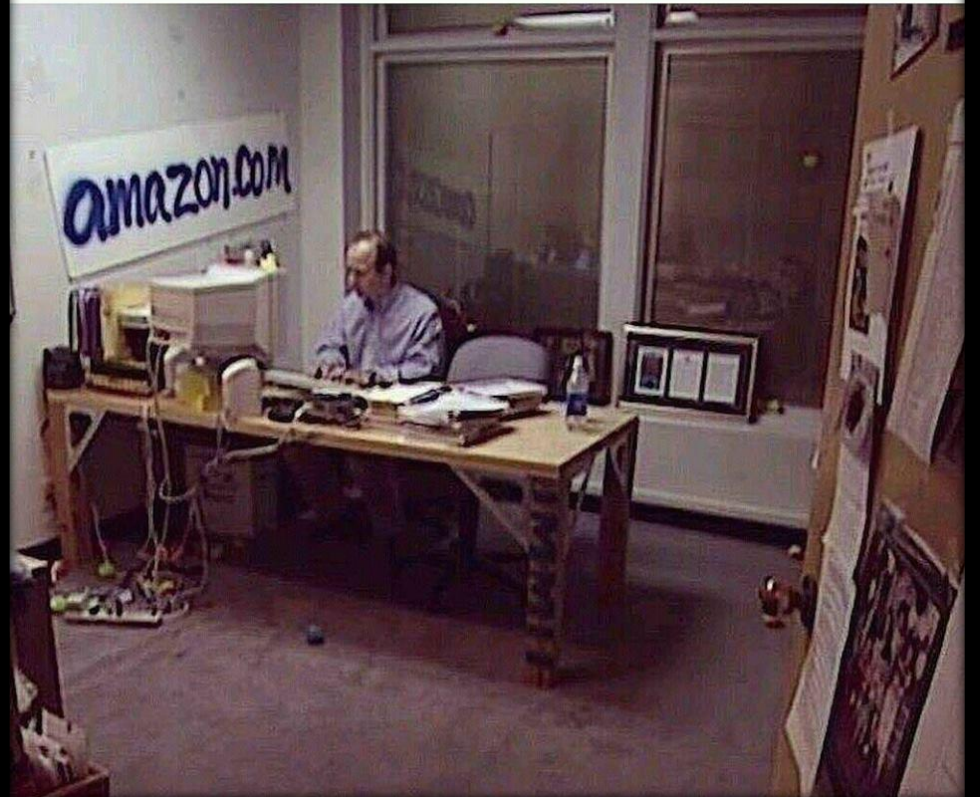
Bättre sömn åt alla

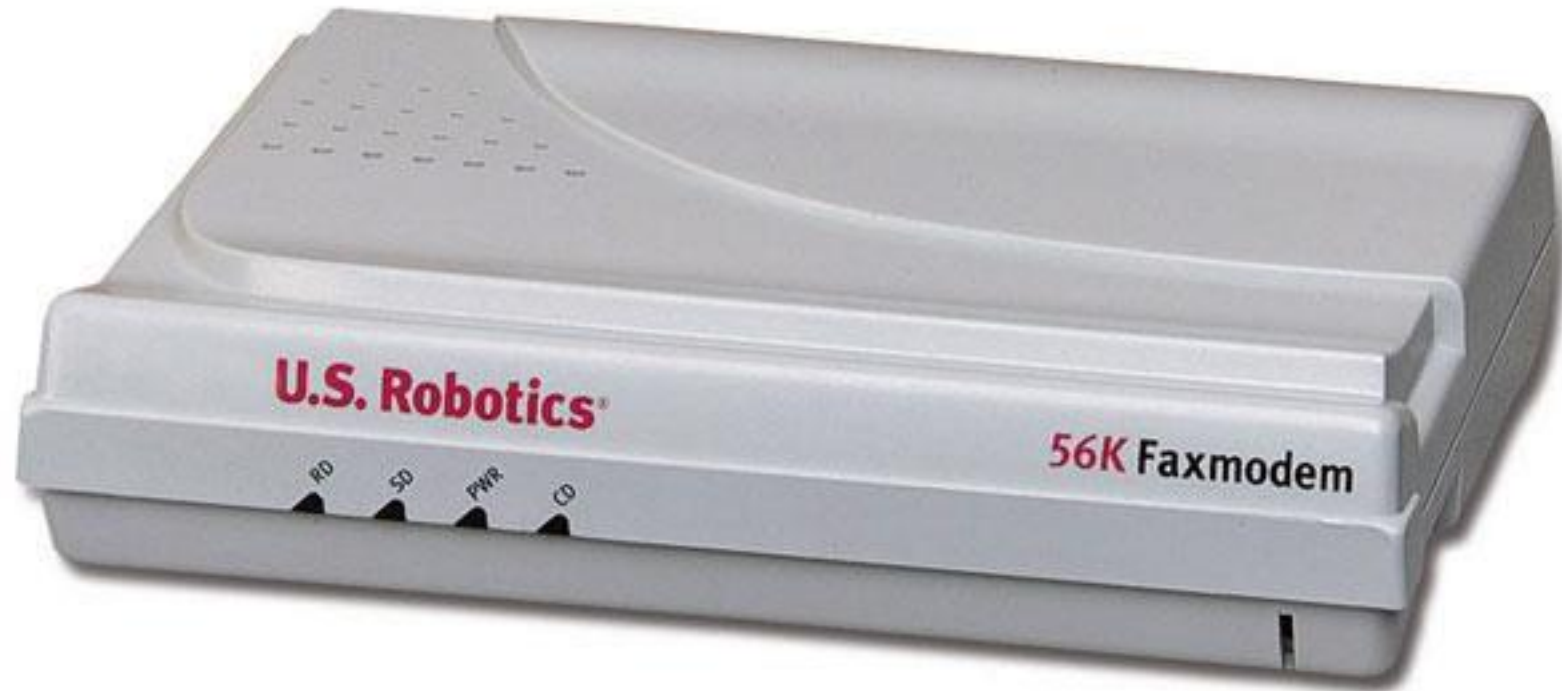


Lyssna på moderna tolkningar av traditionella vaggvisor

[Lyssna här](#)

Jeff Bezos in 1999. Next time you want to give up, think of this.





Open Services Exchange

Jonas "Birger" Birgersson – commercial history of broadband

TIME

"One of Europe's 50
Hottest Tech Firms"

6/2000

RED HERRING

"B2, an early
example of how
these technologies
could transform the
Internet"

2/2000

THE WALL STREET JOURNAL
EUROPE

Cisco and B2...
"Beating traditional
telecom and cable
providers to the
punch on
broadband"

11/1999

FINANCIAL TIMES

"Local video shop
faces its biggest
challenger yet"

5/2000

WIRED

Ethernet Unbound
"Jonas Birgersson
is one reason why
Sweden is kicking
broadband butt"

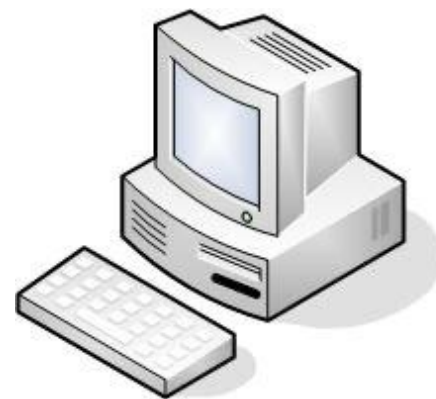
7/2000

FORTUNE

"You Think It's DSL
vs. Cable? Guess
Again"

10/2000





Our actions have
impact



AND THE WINNER IS...



Überfluss



Mangel

low
fixed
cost for
gross



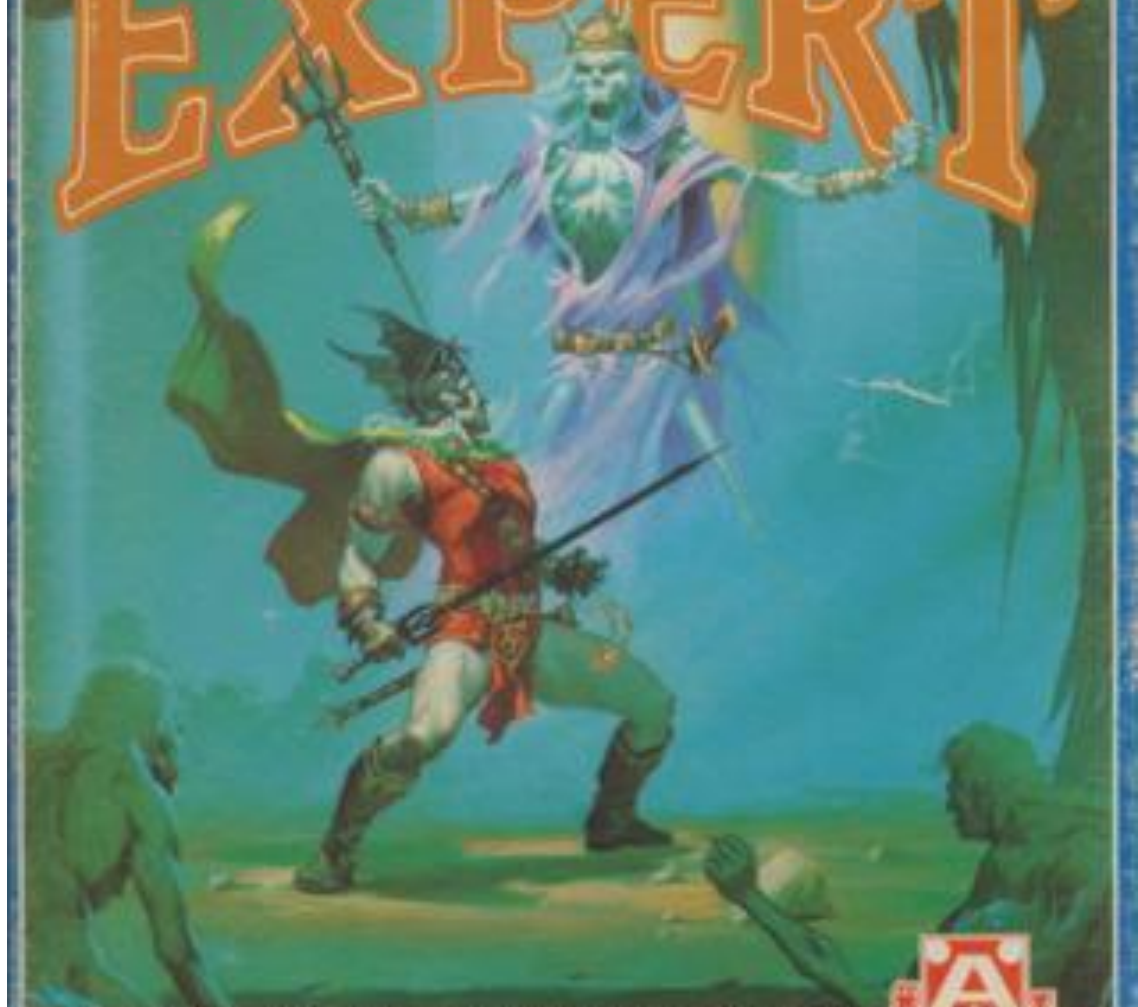
Drakar och Demoner



ETT ROLLSPEL FÖR 3 ELLER FLER SPELARE FRÅN 11 ÅR.



Drakar och Demoner EXPERT



ÅVENTYRET FORTSÄTTER! BYGG UT DITT FAVORITROLLSPEL!





NATIONAL
ACCELERATOR
LABORATORY

Search

ABOUT

RESEARCH

FACILITIES & CENTERS

WORK WITH US

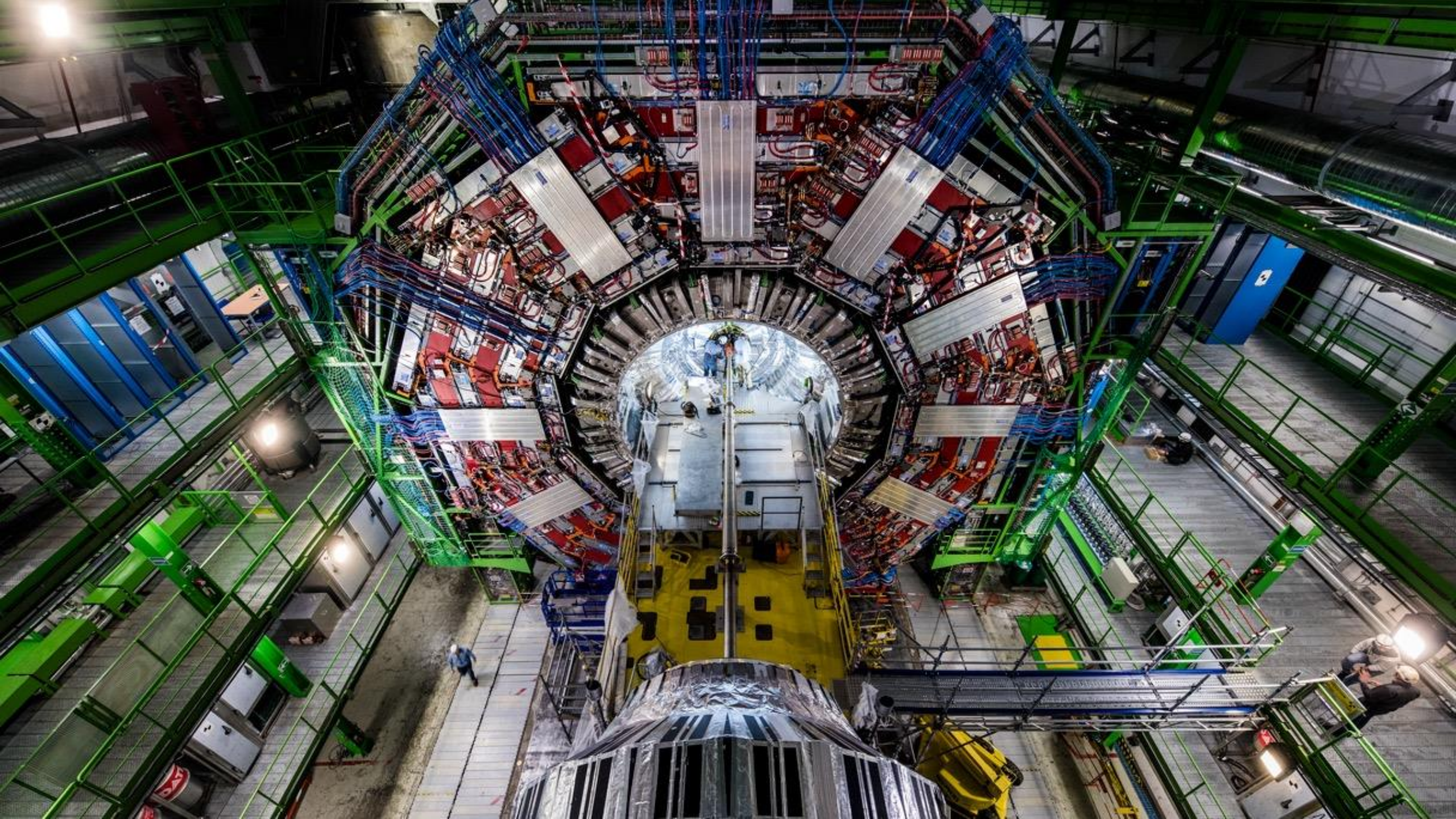
NEWS & EVENTS

THEN AND NOW

Our story



RESISTANCE IS FUTILE







Jerome Hastings

PROFESSOR (RESEARCH) OF PHOTON SCIENCE

Photon Science Directorate

2800 PHD

(2022)

6000 PHD

(2032) est.



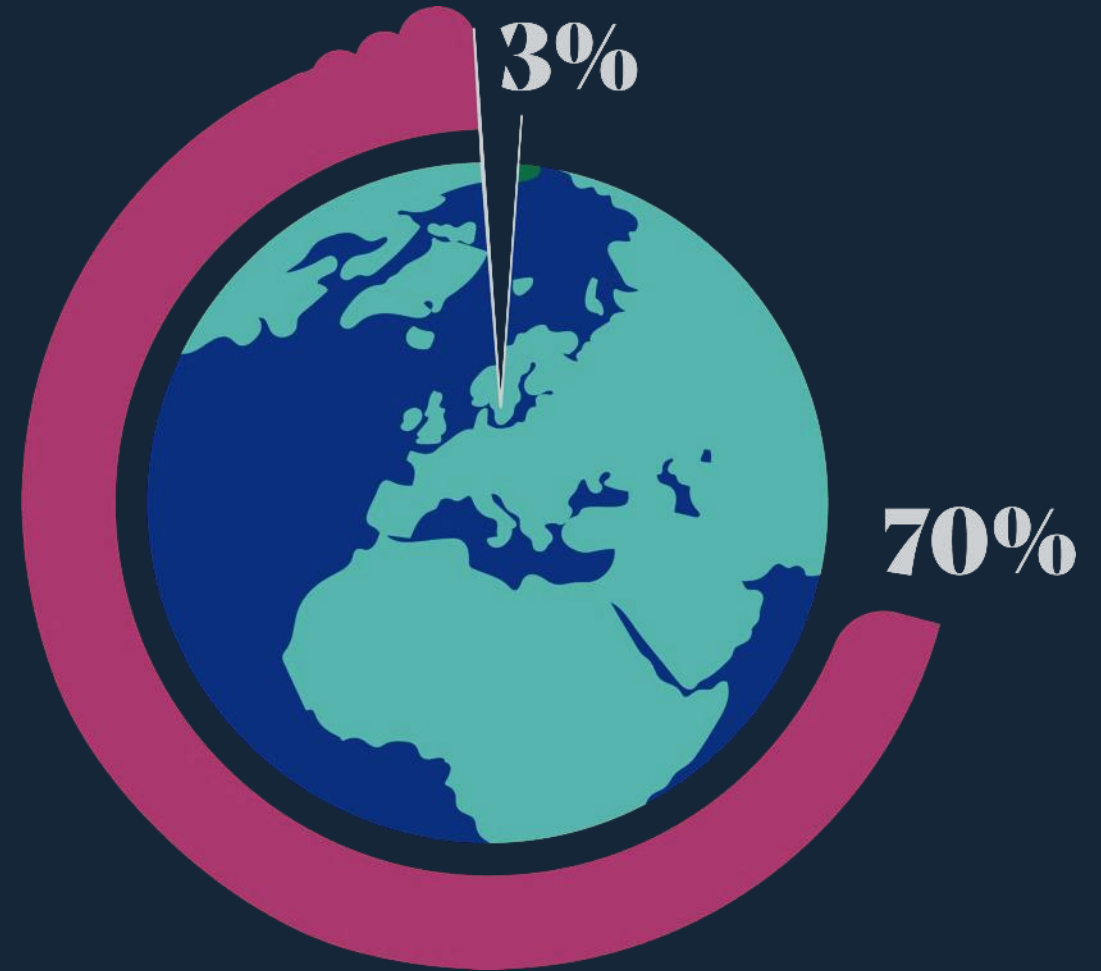
LUNDS
UNIVERSITET

“Lund, a scientific capital”



Why cities?

Cities cover about 3% of the land on Earth and produce about 72% of all global greenhouse gas emissions.



Pioneering Mission: Climate-Neutral and Smart Cities 2030



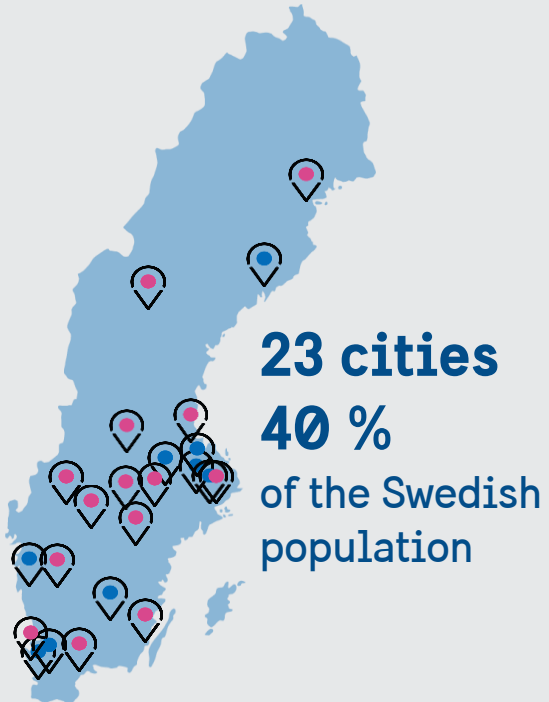
Sweden



Europe

Decarbonized
Cities (Finland)

Globally



**European
Missions**

100 Climate-Neutral
and Smart Cities
by 2030

**NET
ZERO
CITIES**



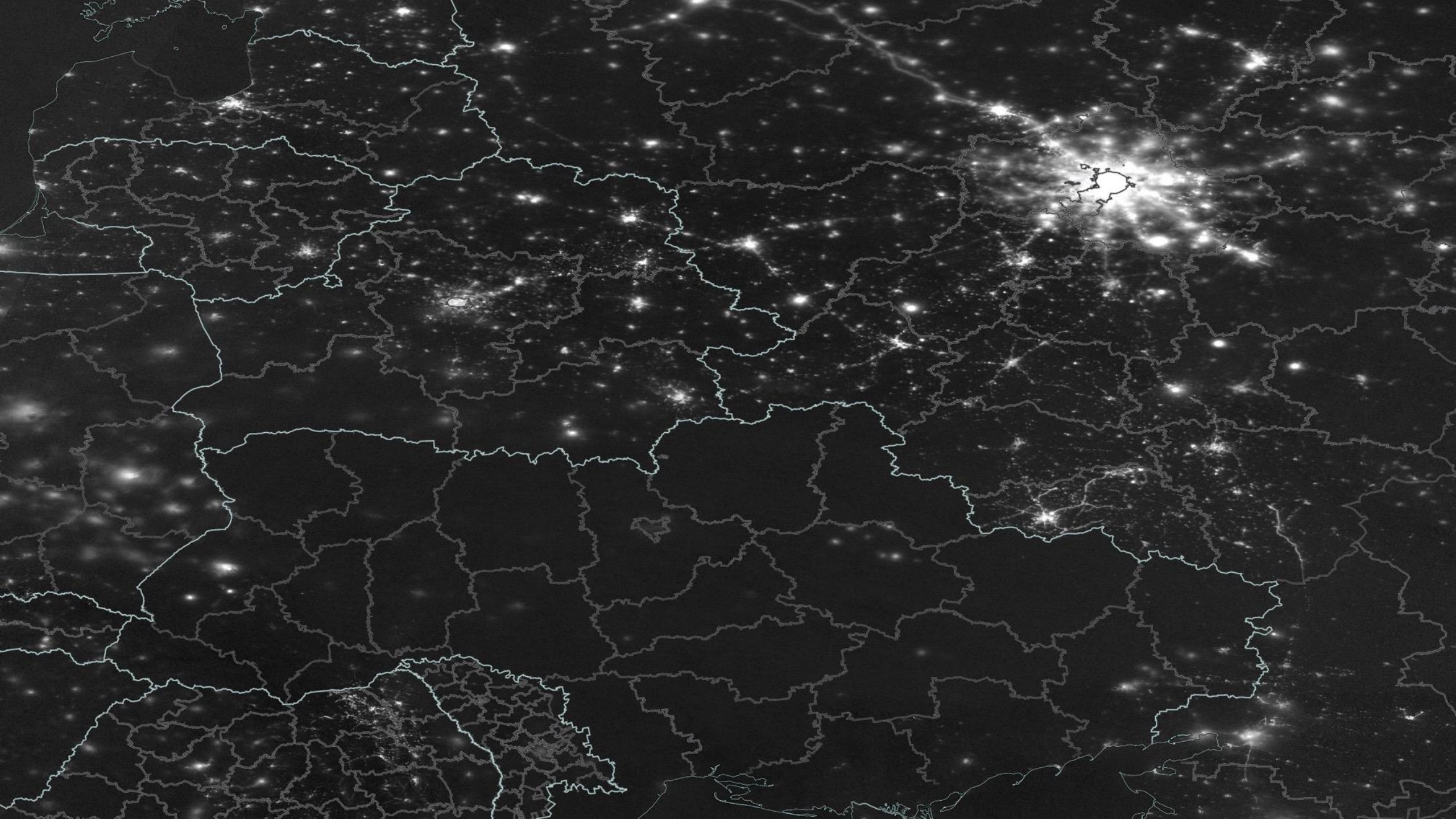
112 cities (of which 7 Swedish cities)

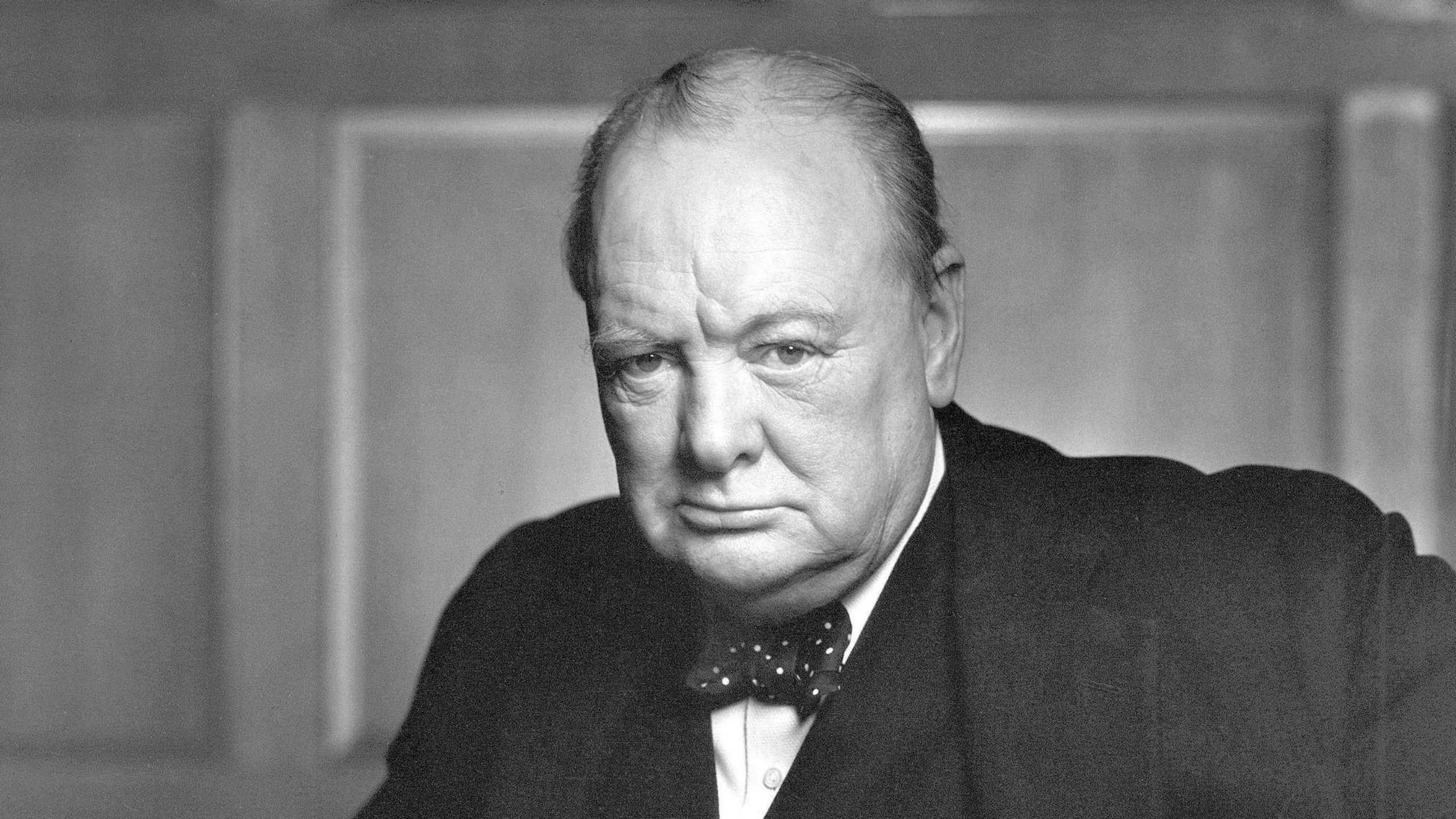


This is Europe's man on the moon moment.

The deal, which aims to make **Europe the first climate-neutral continent by 2050** is a roadmap for making the EU's economy sustainable by turning climate and environmental challenges into opportunities across all policy areas and making the transition **just and inclusive for all.**







**We need to innovate
how we innovate**



To succeed with **system change**, we need innovation with a **system perspective!**

Technology, products and processes

Business models and investments

Policy and Regulations

Behavior, culture and values

Infrastructure



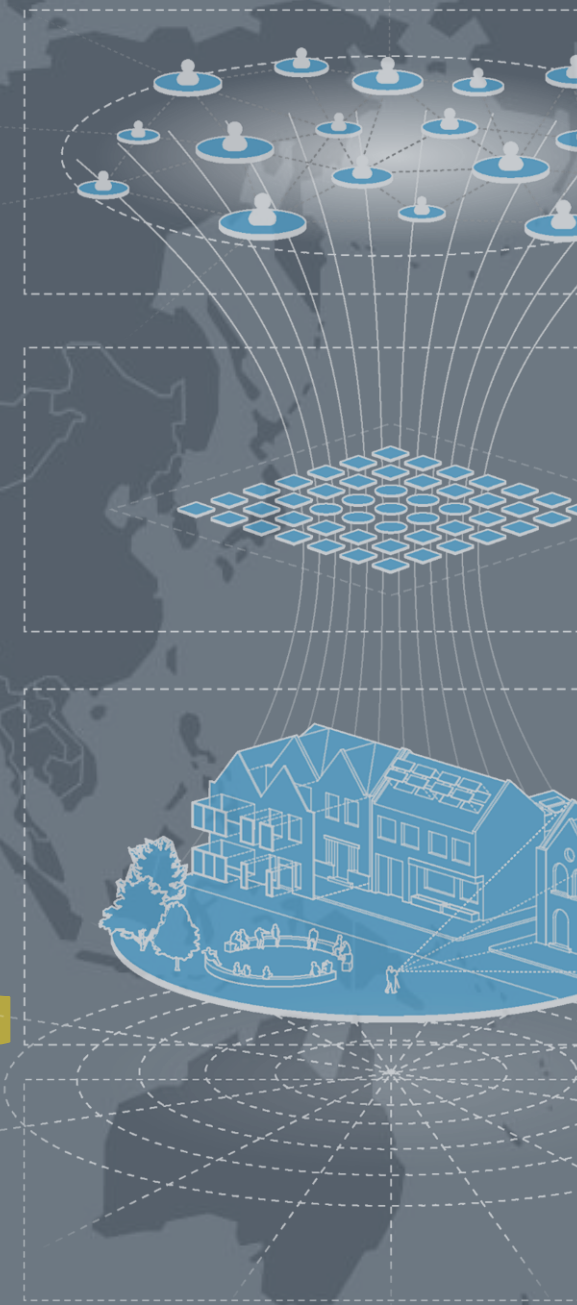
System demonstrators for climate neutrality

Sweden is investing in system demonstrators and pilots to form a new approach to drive change and contribute to the mission established in the Climate City Contract 2030 pioneered by Viable Cities. By...

- Mobilizing actors across the system
- Addressing underlying challenges for change
- Building collective learning
- Designing and implementing a portfolio of system-level interventions
- Focusing on scaling up

System demonstrators and system pilots aim to create a 'new normal' in critical areas to accelerate the transition to climate neutrality.

Demos and pilots*



Zero-emission mobility

Affordable climate-neutral neighborhoods

*System demonstrators and system pilots in planning phase

+ Pioneer the possible.

BRISTOL



+ Pioneer the possible.

MAKINDYE SSABAGABO



+ Pioneer the possible.

STOCKHOLM



+ Pioneer the possible.

LUND

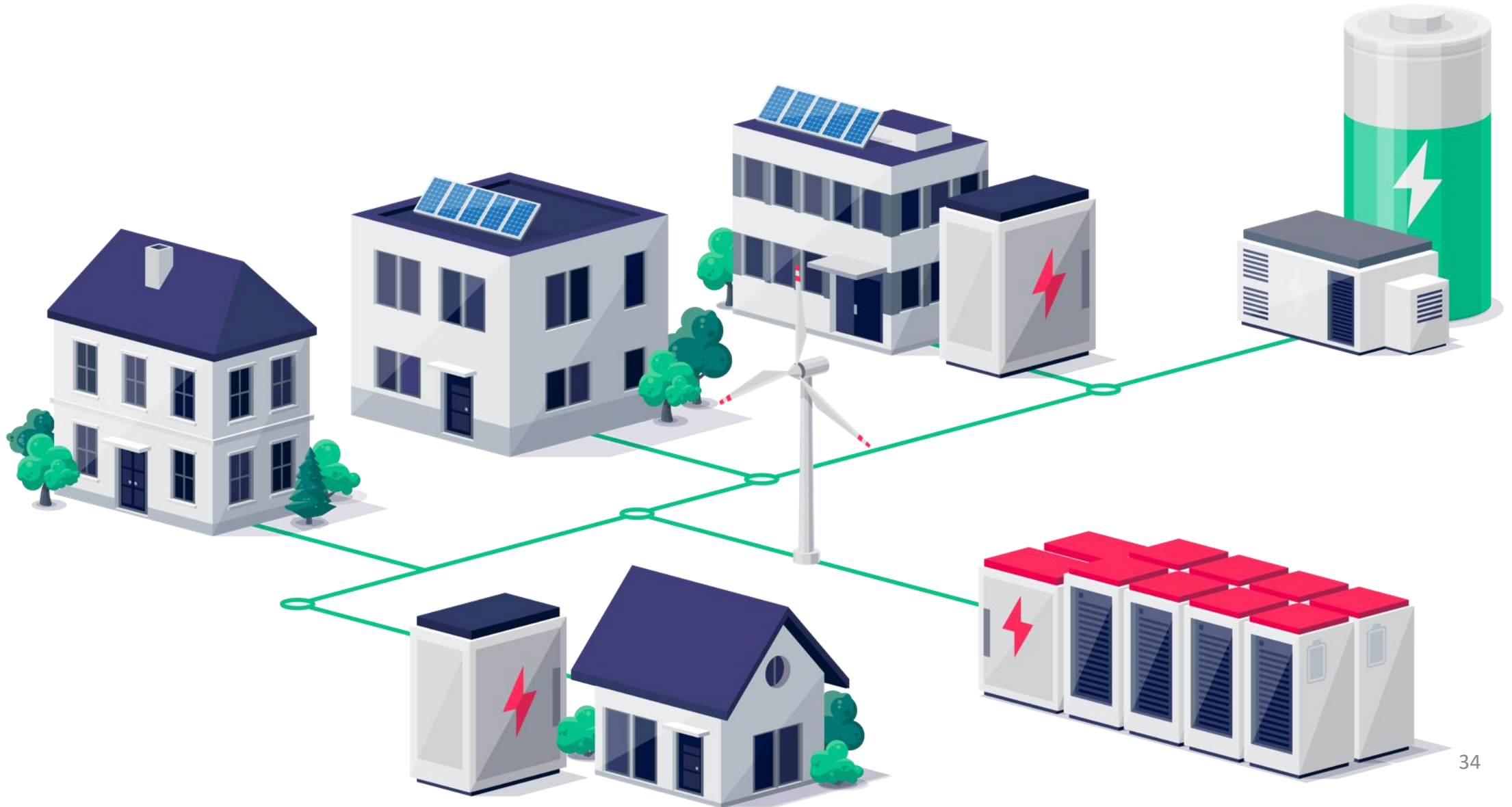


2030

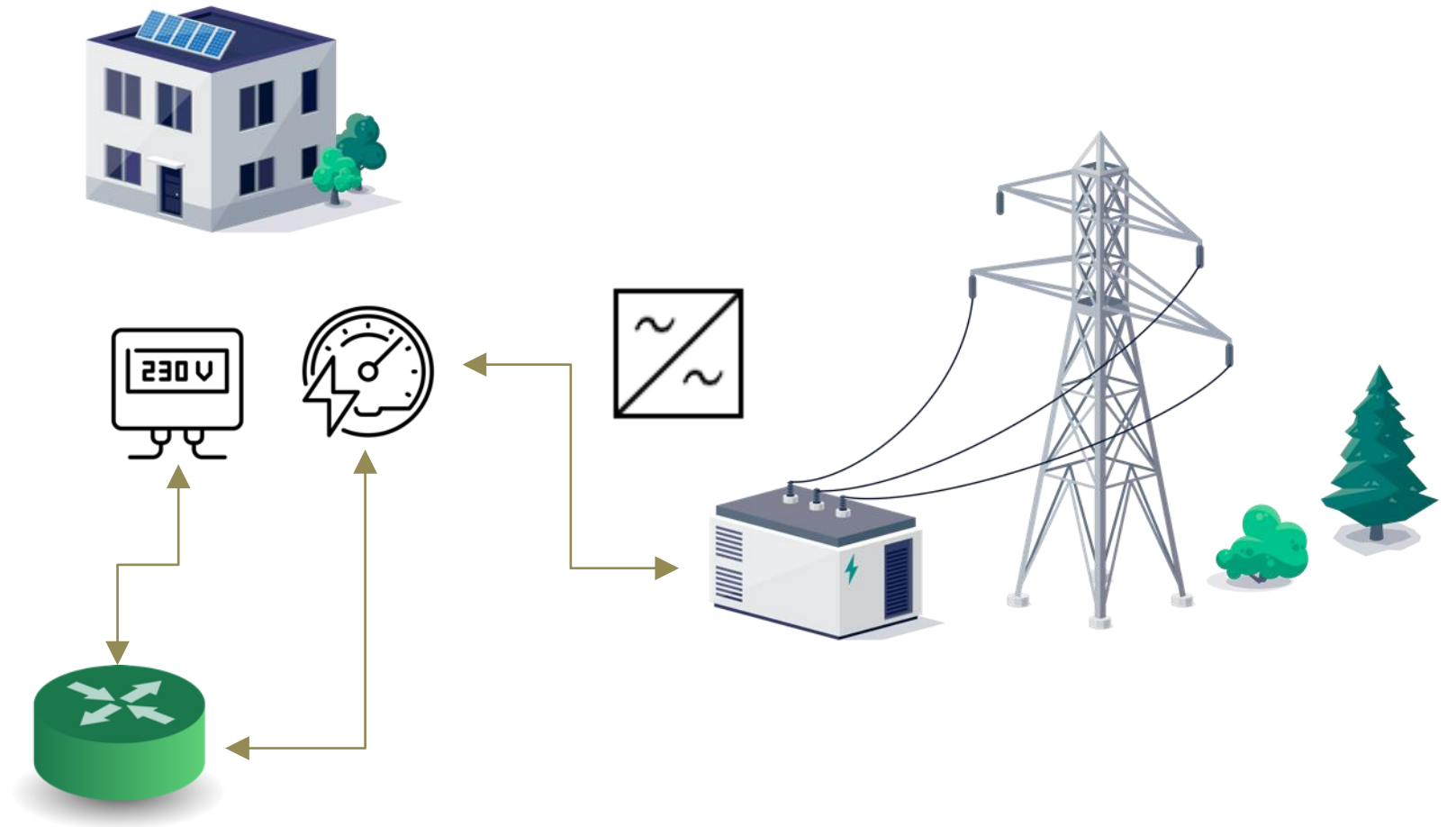
Creating a new resilient & flexible
energy landscape
based new scalable technology &
infrastructure
financing solutions



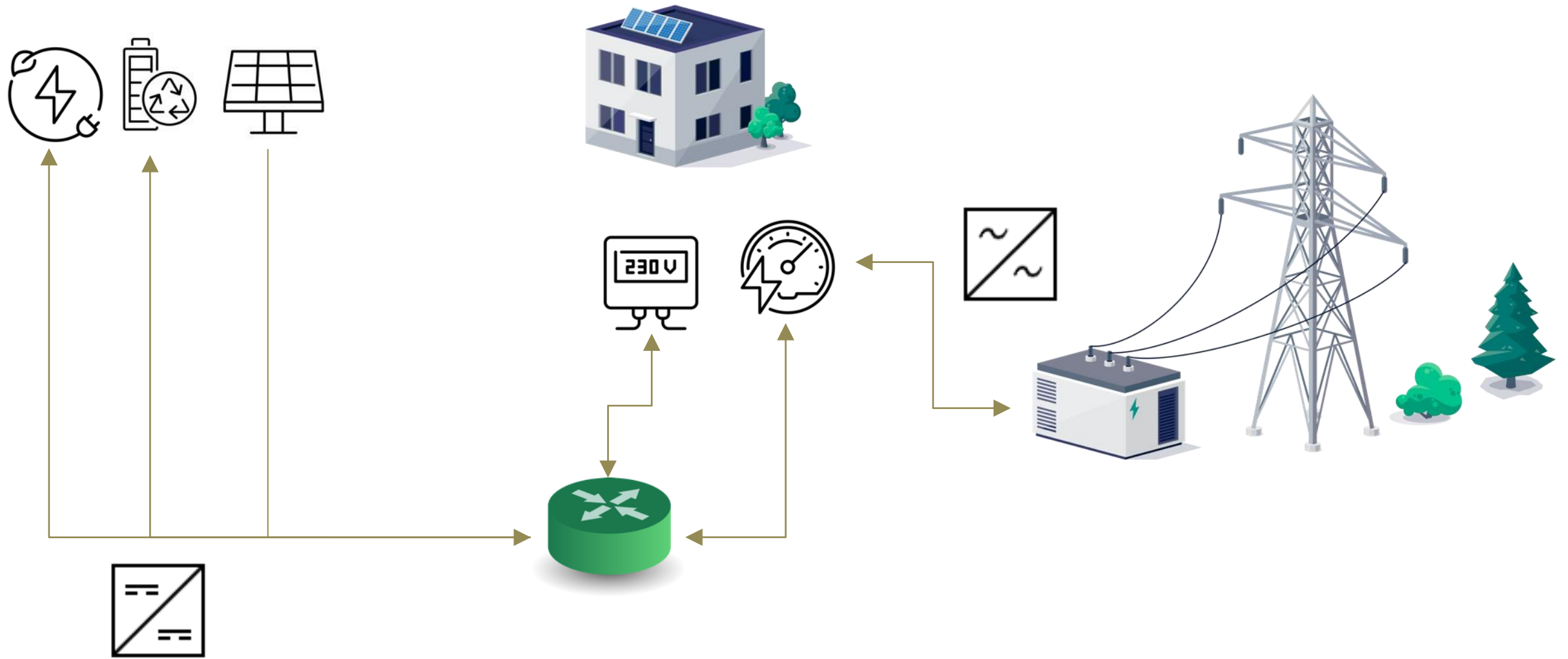
Neighbourhood Energy Sharing



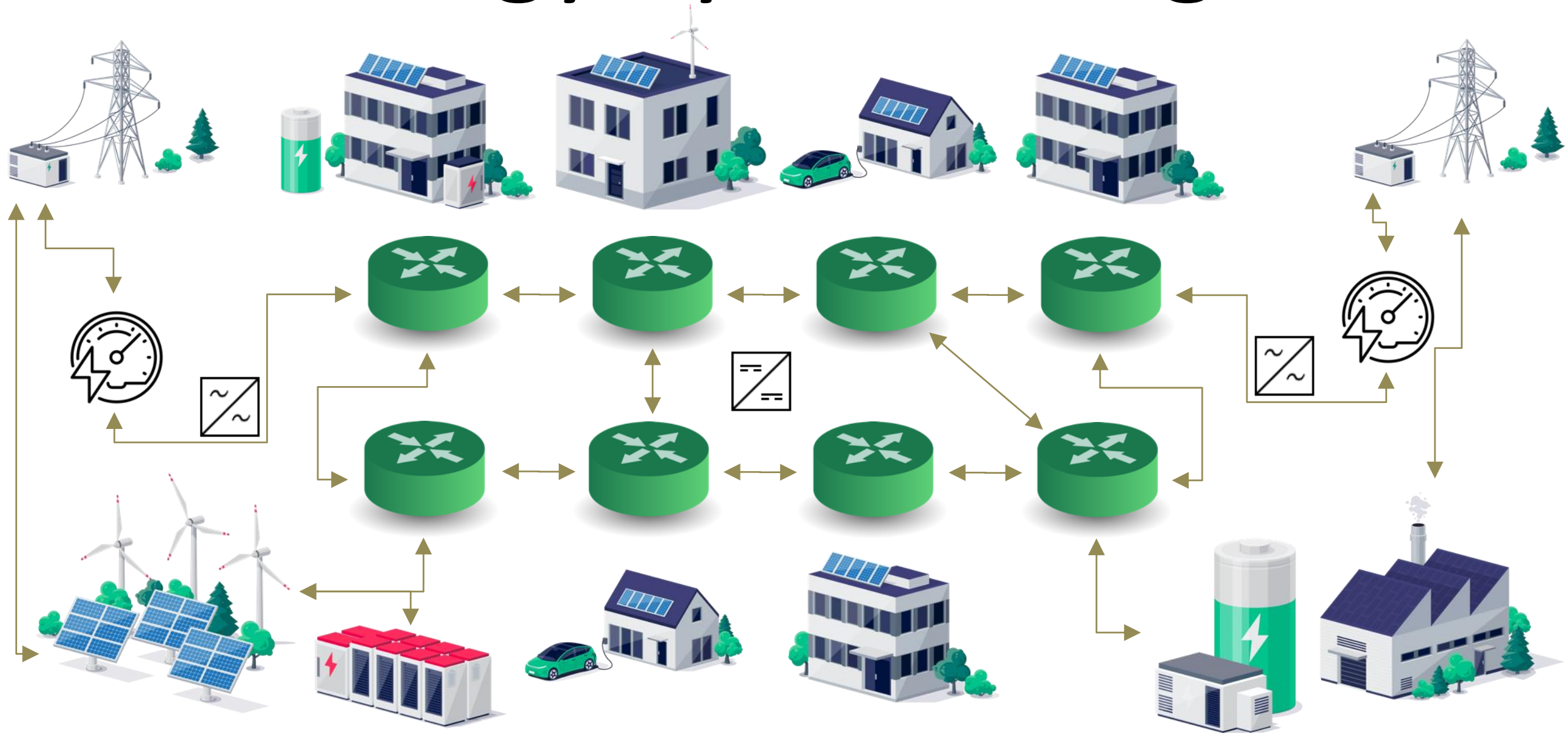
New Energy System single buildi



New Energy System single buildi




New Energy System neighbourhood



Smart Energy


Battery Storage

Battery Charge: **100%**
Battery Capacity: **400KwH**
Est. capacity: **21h 30 min**

Go to Energy storage 


Hydrogen Storage

Storage Charge: **93%**
Storage Capacity: **400KwH**
Heat Capacity: **400KwH**
Est. capacity: **21h 30 min**

Go to Energy storage 


Thermal Storage

Storage Charge: **93%**
Storage Capacity: **400KwH**
Heat Capacity: **400KwH**
Est. capacity: **21h 30 min**

Go to Energy storage 


Energy Sharing

Generation: **4.36KwH**
Power: **16KwH/24H**

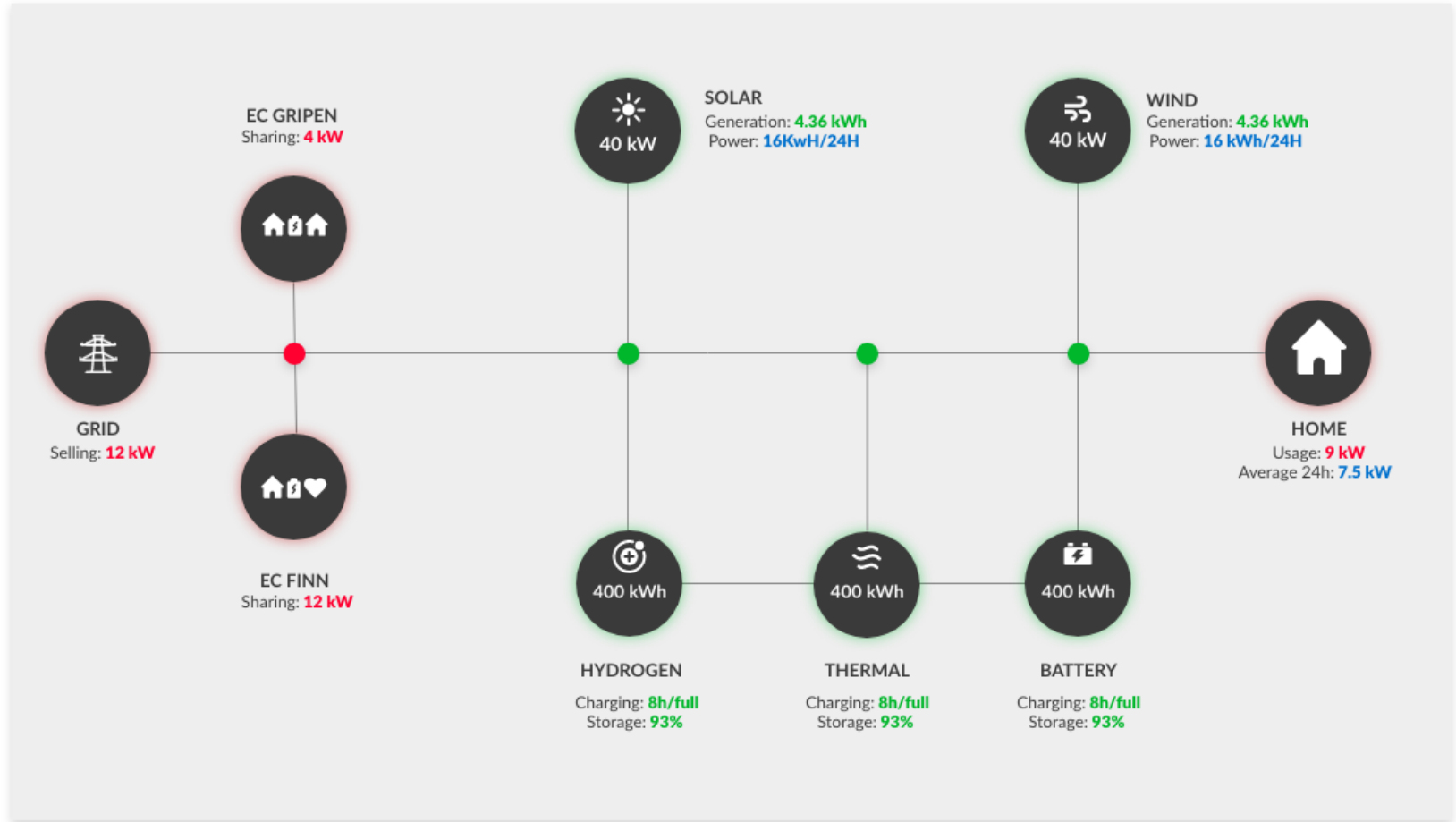
Go to Energy sharing 

Energy Market

Generation: **4.36KwH**
Power: **16KwH/24H**

Go to Energy market 

ENERGY FLOW



Internet Access

250/250 MBPS

For you who want to stream and play at the same time.

500/500 MBPS

Large files, many streams, high demands.

1000/1000 MBPS

Many gadgets, many friends - extreme speeds.

With fast internet access, you can be more efficient and connect with others easily. It enables faster download and upload speeds, seamless streaming and video conferencing.

Compare features and find the best fit for your needs and budget.

SUPPLIERS

	Supplier Info	Monthly Cost	Startup cost	Termination	
	DEAL!	275 kr	0 kr	3 month(s)	
		310 kr	149 kr	1 month(s)	
		290 kr	0 kr	3 month(s)	
		285 kr	99 kr	3 month(s)	
		290 kr	149 kr	12 month(s)	
	DEAL!	290 kr	0 kr	3 month(s)	
		310 kr	149 kr	1 month(s)	
		290 kr	149 kr	12 month(s)	

Go Back

Overview

Options

Checkout

Next Step



Energy Balance

With batteries, you can sell your capacity to help balance the grid. This is only possible with the help of smart control of flexible resources such as batteries which make the electricity system more efficient and reliable.

Solar and wind power combined with batteries and hydrogen can support the electricity system significantly better and faster than traditional forms of power.

Choose Supplier

Overview



Options



Check Out



Next Step



Energy Storage

STORAGE CAPACITY **100 KWH**

This is your current battery capacity, we recommend that you never go below 90% of your total capacity out of safety concern.



Please choose the amount of your storage you would like to offer to the to the balance provider, as you move the slider you can see how your compensation changes.

SUPPLIERS

	Supplier Info	Yearly Revenue	Startup bonus	Termination	
	DEAL! 	150.000 kr	75.000 kr	24 month(s)	
		125.000 kr	25.000 kr	12 month(s)	
		90.000 kr	0 kr	24 month(s)	
		100.000 kr	9000 kr	3 month(s)	
		95.000 kr	25.000 kr	12 month(s)	
	DEAL! 	165.000 kr	Easee Charger Value 14.500 kr	12 month(s)	
		130.000 kr	25.000 kr	6 month(s)	
		113.500	14900 kr	12 month(s)	

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Overview

Options

Checkout

Next Step



EV Charging

A car charging service provides customers with access to charging stations for electric vehicles. The service allows customers to easily find, reserve, and pay for charging stations.

It also provides convenience and safety for drivers by allowing them to charge their vehicles in a safe and secure environment.

Choose Supplier

Overview



Options



Check Out



Next Step



Operations the energy protocol

02 The Energy Protocol (EP)

Inspired by the Internet architecture distributed and independent networks that can function as standalone but will benefit greatly from being interconnected with as many compatible networks as possible. EP will include similar concept to peering & routing but for Energy Sharing. In short, the language needed to enable the

"Internet of Energy"

A Protocol for Packet Network Intercommunication

VINTON G. CERF AND ROBERT E. KAHN,
MEMBER, IEEE

Abstract — A protocol that supports the sharing of resources that exist in different packet switching networks is presented. The protocol provides for variation in individual network packet sizes, transmission failures, sequencing, flow control, end-to-end error checking, and the creation and destruction of logical process-to-process connections. Some implementation issues are considered, and problems such as internetwork routing, accounting, and timeouts are exposed.

INTRODUCTION

IN THE LAST few years considerable effort has been expended on the design and implementation of packet switching networks [1]-[7],[14],[17]. A principle reason for developing such networks has been to facilitate the sharing of computer resources. A packet communication network includes a transportation mechanism for delivering data between computers or between computers and terminals. To make the data meaningful, computer and terminals share a common protocol (i.e., a set of agreed upon

of one or more *packet switches*, and a collection of communication media that interconnect the packet switches. Within each *HOST*, we assume that there exist *processes* which must communicate with processes in their own or other *HOSTS*. Any current definition of a process will be adequate for our purposes [13]. These processes are generally the ultimate source and destination of data in the network. Typically, within an individual network, there exists a protocol for communication between any source and destination process. Only the source and destination processes require knowledge of this convention for communication to take place. Processes in two distinct networks would ordinarily use different protocols for this purpose. The ensemble of packet switches and communication media is called the *packet switching subnet*. Fig. 1 illustrates these ideas.

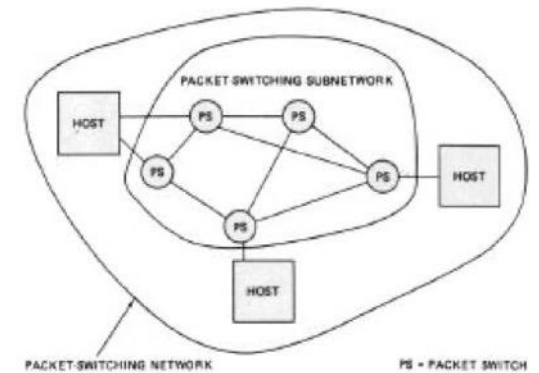
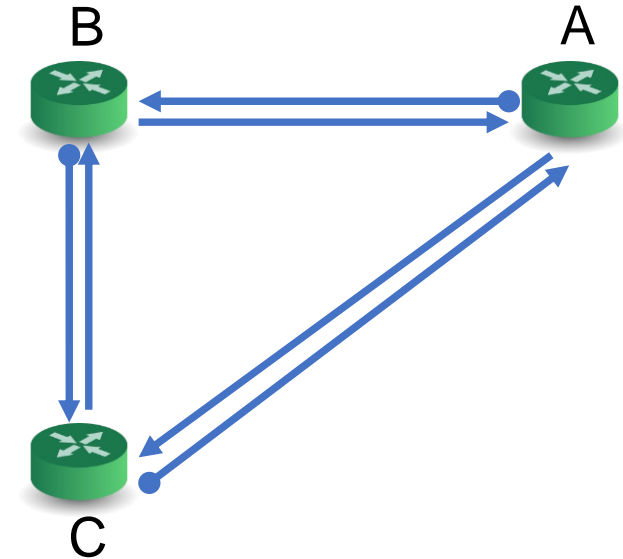


Fig. 1. Typical packet switching network.

ENERGY
ENGINEERING
TASK
FORCE

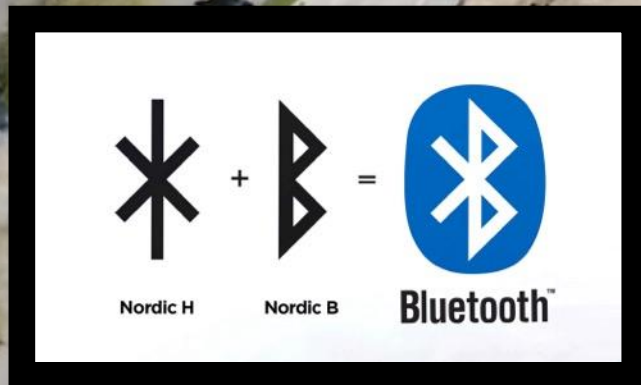
Standing on the
shoulders of giants.

Where do

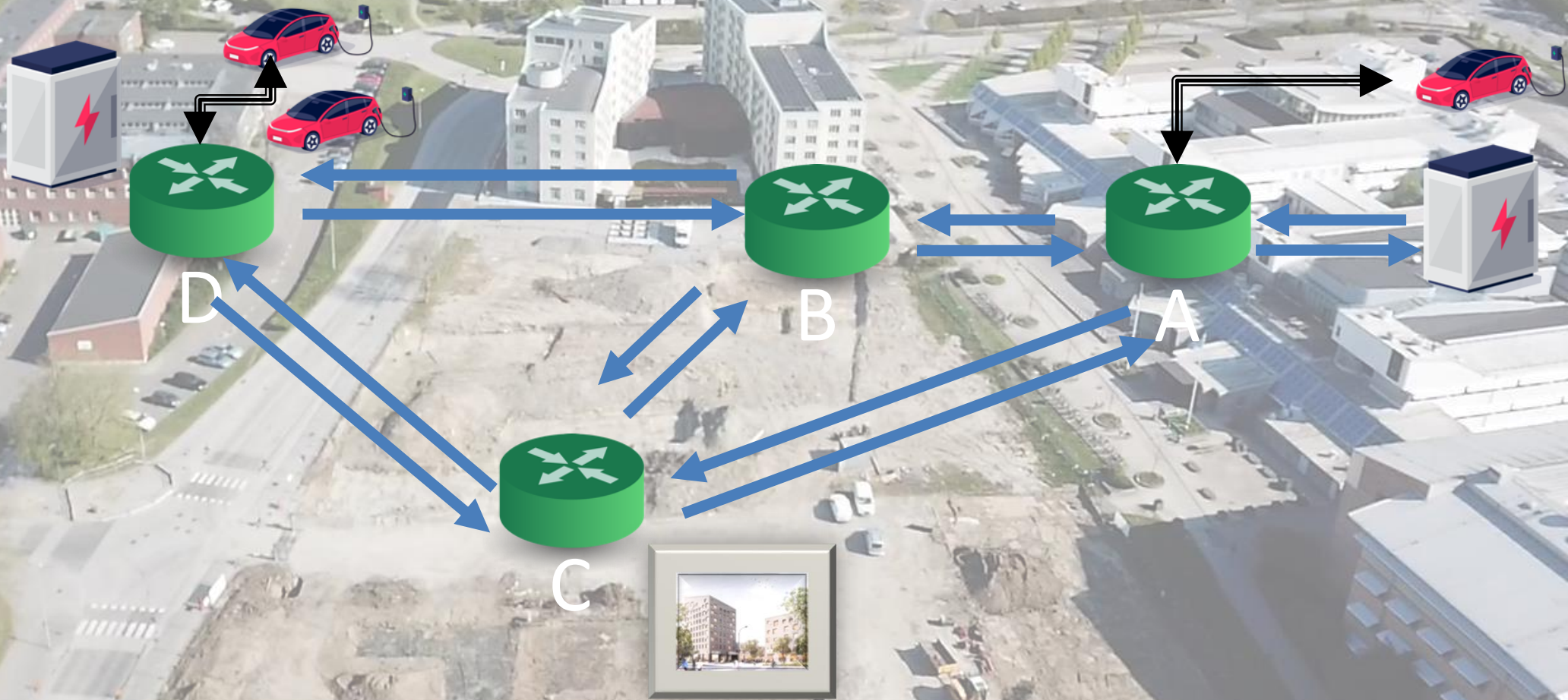
we start



◀ BREDBANDSBOLAGET ▶



Site Alfa / Node 01.3



 Pioneer the possible.

Tack!
Thank you!

jb@viaeuropa.net

olle.dierks@viablecities.se

viablecities.se/systemdemonstrator

unhabitat.org

sweden.se