



TULEVIKU LINN JA ÜHENDUSTE OLULISUS

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TARTU PLANEERIMISKONVERENTS
V Sessioon - Tõejärgne arhitektuur
02. november 2018

VABADUS

VÕRDSUS

ÜHENDUVUS

A futuristic train station with a glowing tunnel and a train. The station has a modern, metallic design with arched windows on the left side. The tracks lead into a bright, glowing tunnel. A train is visible on the tracks, with a large, glowing circular element on its side. The overall atmosphere is bright and futuristic.

VABADUS

"STANDARD"

REG. U. S. PAT OFF.

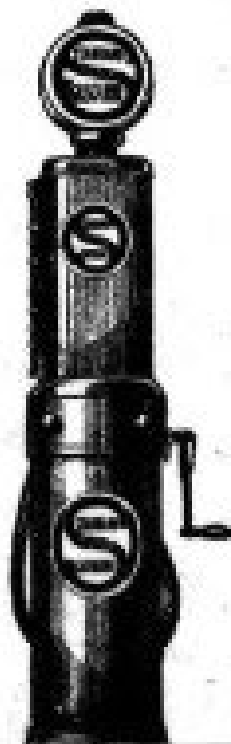
THE BEST

GASOLINE

MONEY CAN BUY

STANDARD OIL COMPANY

(NEW JERSEY)

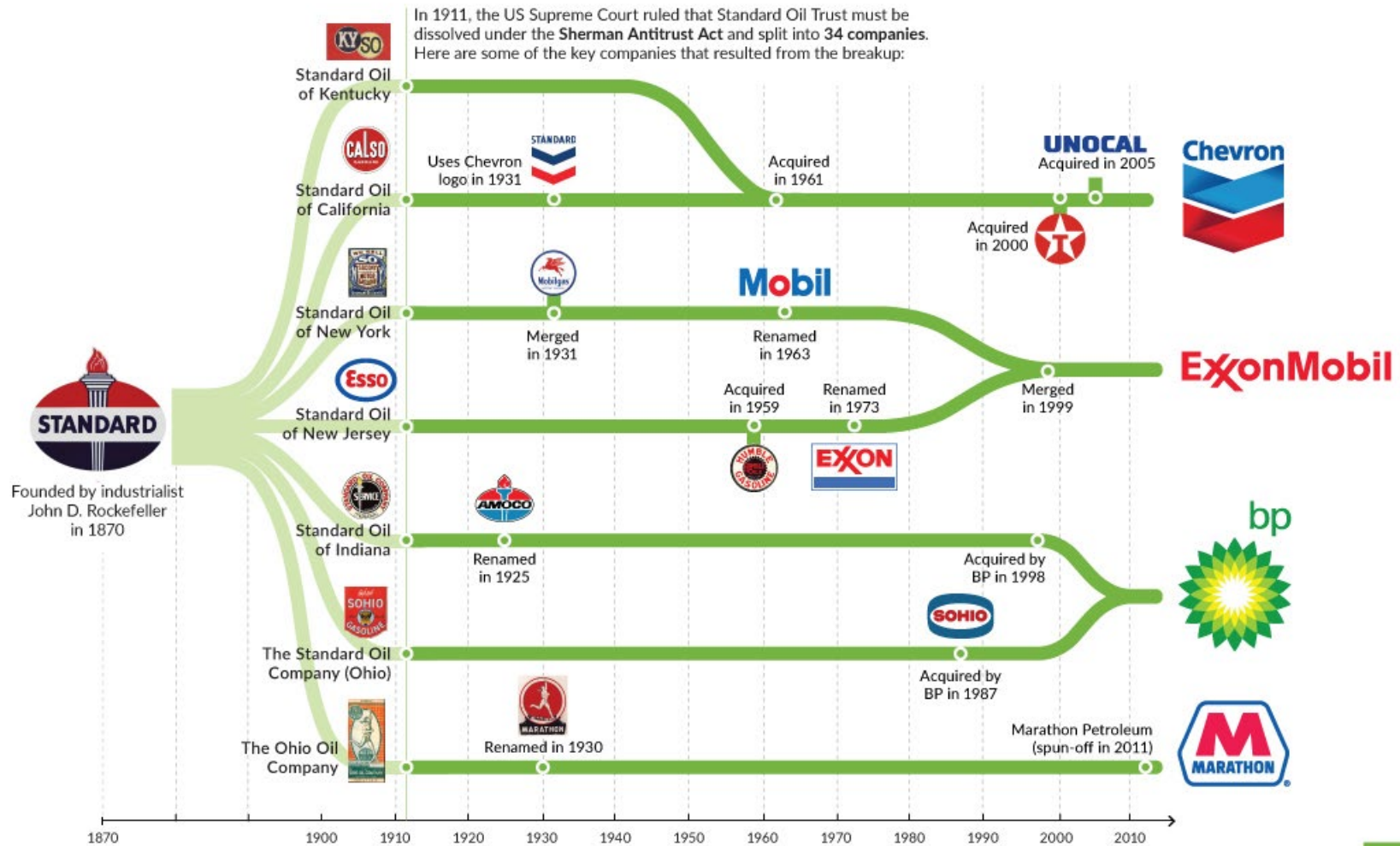


*At the turn of the 20th century, John D. Rockefeller's Standard Oil was a force to be reckoned with. In the year 1904, it controlled **91% of oil production** and **85% of final sales** in the United States.*

- Jeff Desjardins 24.11.2017 -

THE EVOLUTION OF STANDARD OIL

Following the remnants of John D. Rockefeller's oil juggernaut



SOURCE: Wikipedia

visualcapitalist.com



VABA TURU JA KONKURENTSI TAASTAMINE

THE EXTRAORDINARY SIZE OF AMAZON IN ONE CHART

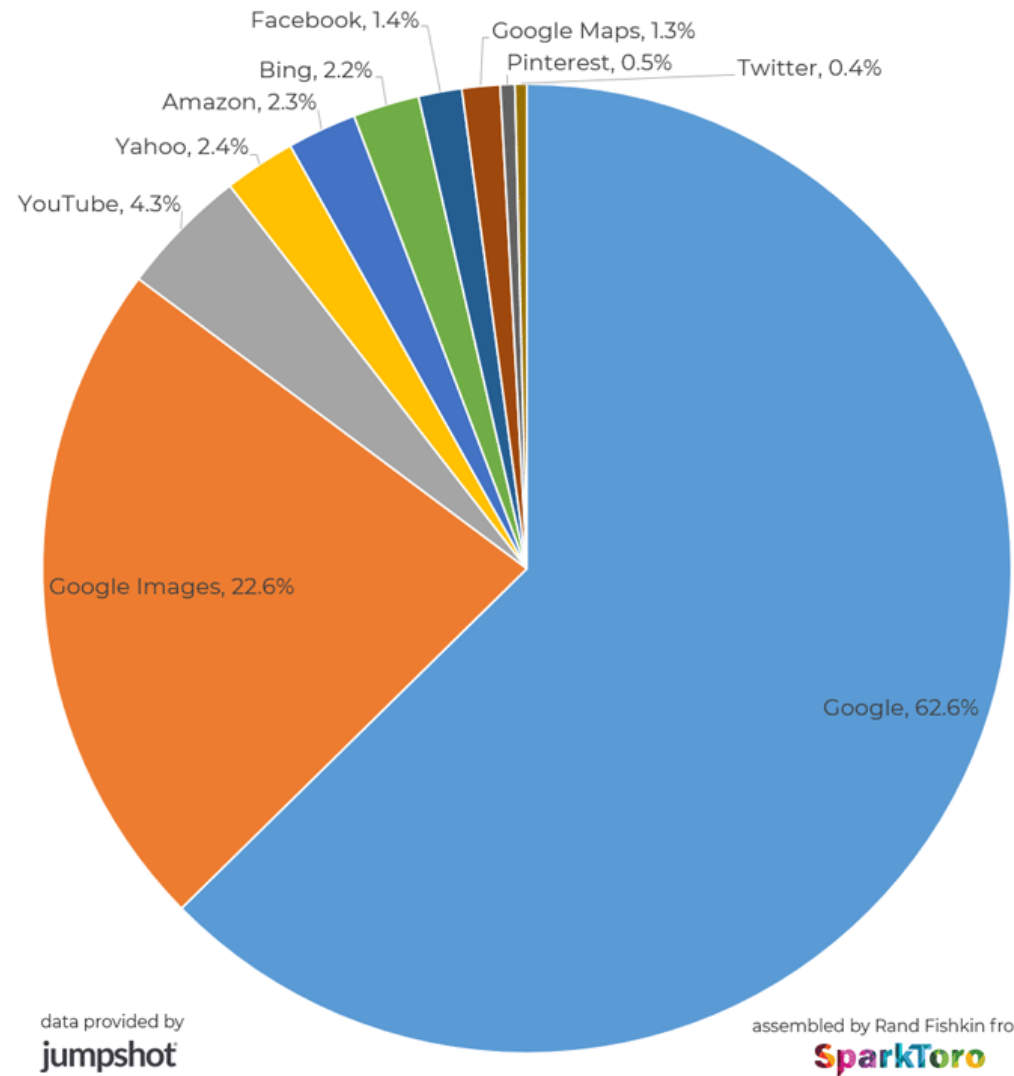
Amazon is bigger than most brick and mortar retailers put together

Market value as of December 30, 2016



Share of Web Searches | February 2018

(via Jumpshot's US clickstream panel)

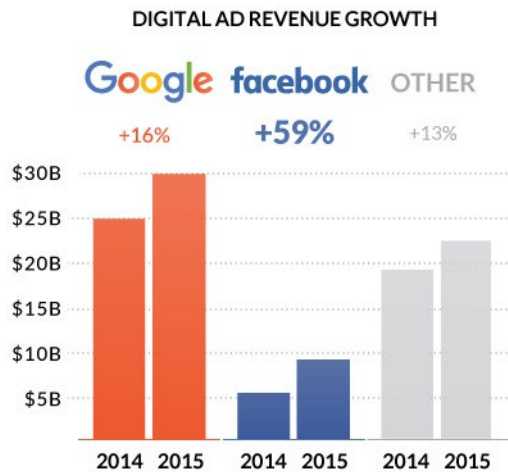


21. SAJANDI MONOPOLID - GOOGLE

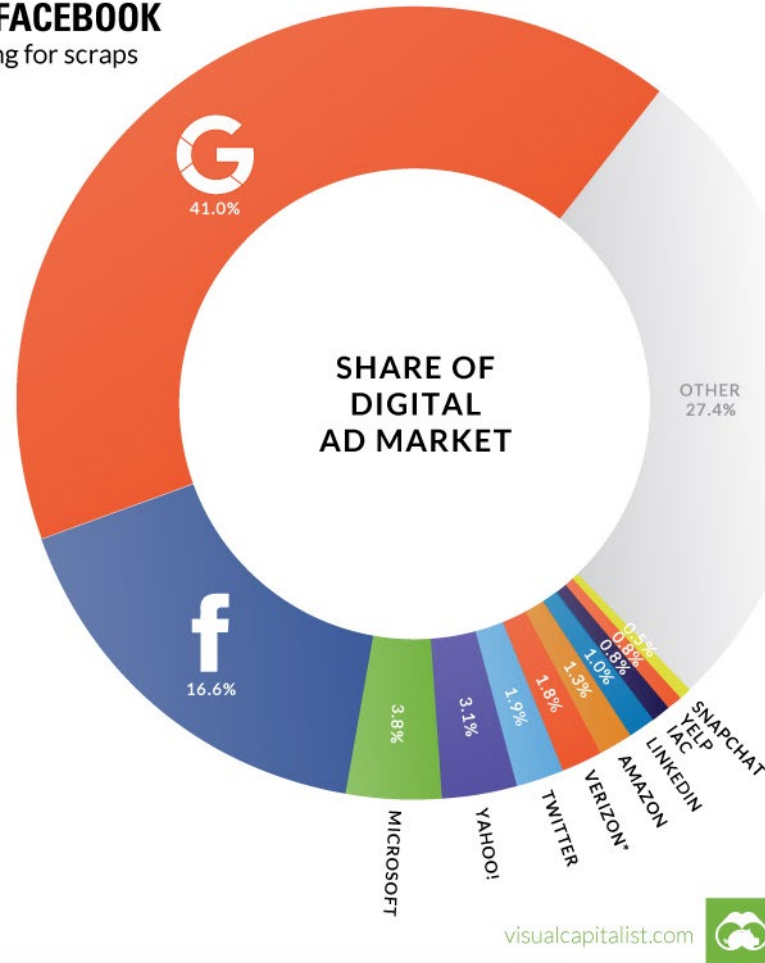
THE DOMINANCE OF GOOGLE AND FACEBOOK

In the digital ad market, everyone else is begging for scraps

Google and Facebook control **57.6%** of the digital ad market, and their slices of the pie are only growing.



*AOL and Millennial Media
Source: eMarketer

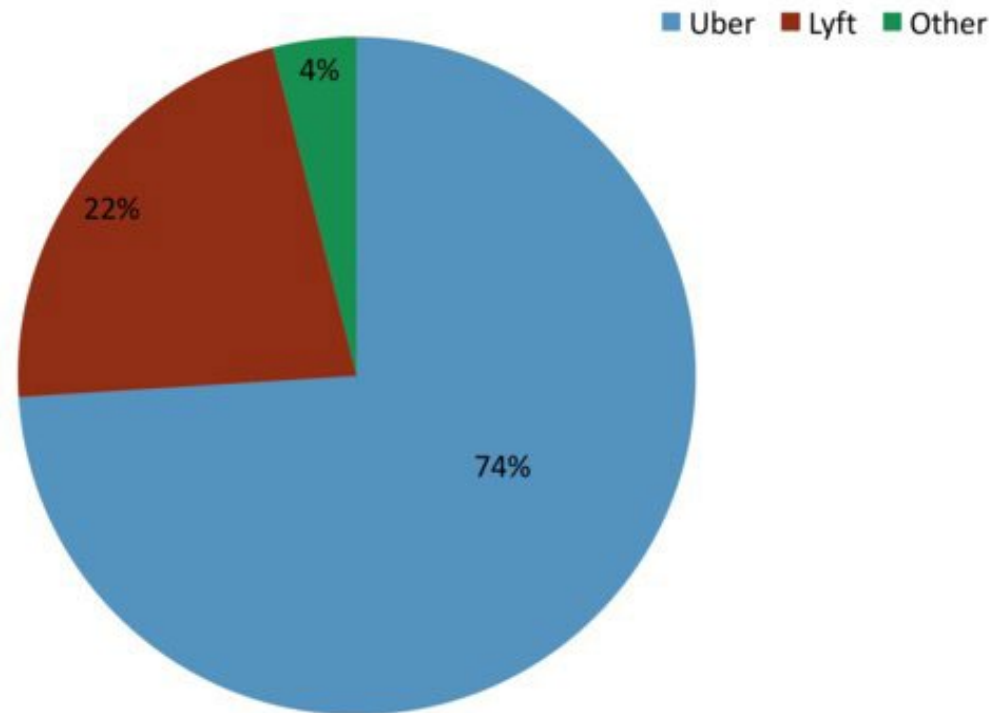


visualcapitalist.com



US Ride-Hailing Market Share

**As of September 2017*

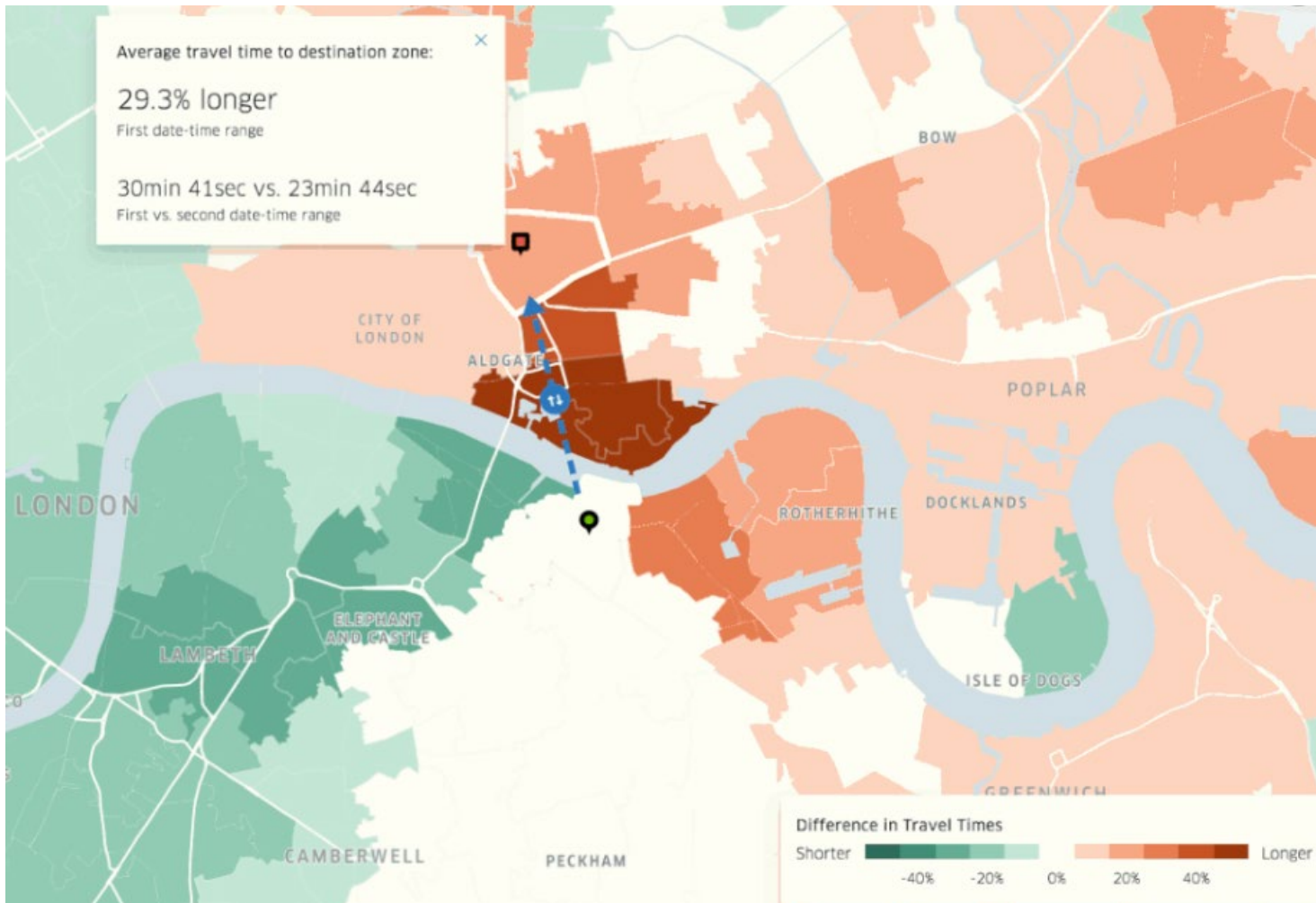


BI INTELLIGENCE

Source: Second Measure, 2017

21. SAJANDI MONOPOLID - UBER

Kelle andmetega planeeritakse tuleviku linna?



UBER MOVEMENT - 2016 Toweri silla sulgemise mõjuanalüüs

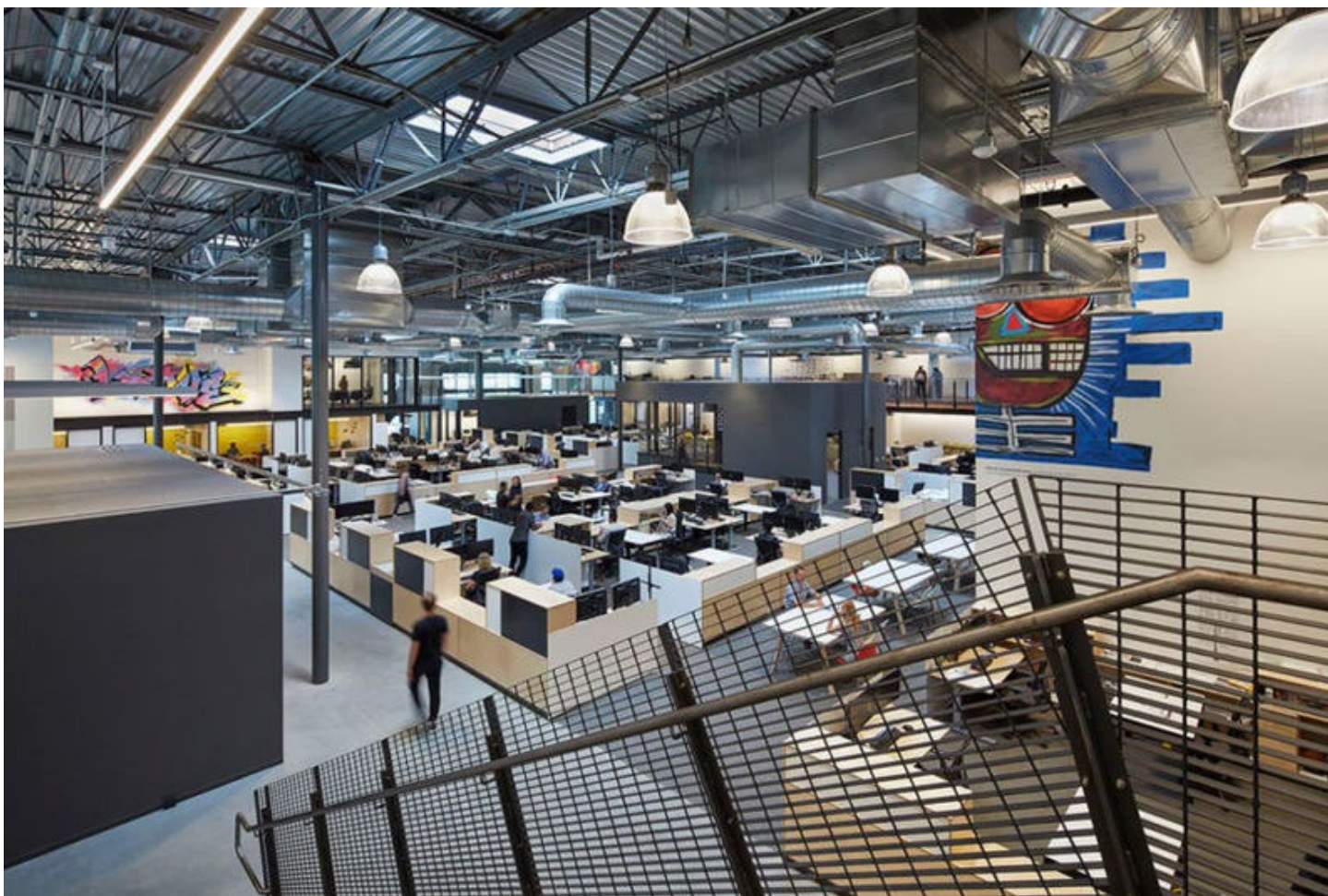


Economist.com

AMAZONI EFEKT - KAUBANDUSKESKUSTE VABANEV PIND



TELLISKIVI LINNAK ÜHE KATUSE ALL - LONG BEACH CALIFORNIA



RUUMI TAASKASUTUS



ATRAKTIIVSE FRONDI LOOMINE

A futuristic train station with a glowing eye-like structure on the right and a train platform on the left. The scene is bathed in a warm, golden light, suggesting a sunrise or sunset. The eye-like structure is composed of concentric circles and a central glowing orb. The platform has a tactile paving strip and a yellow safety line. The train tracks are visible on the right side of the platform.

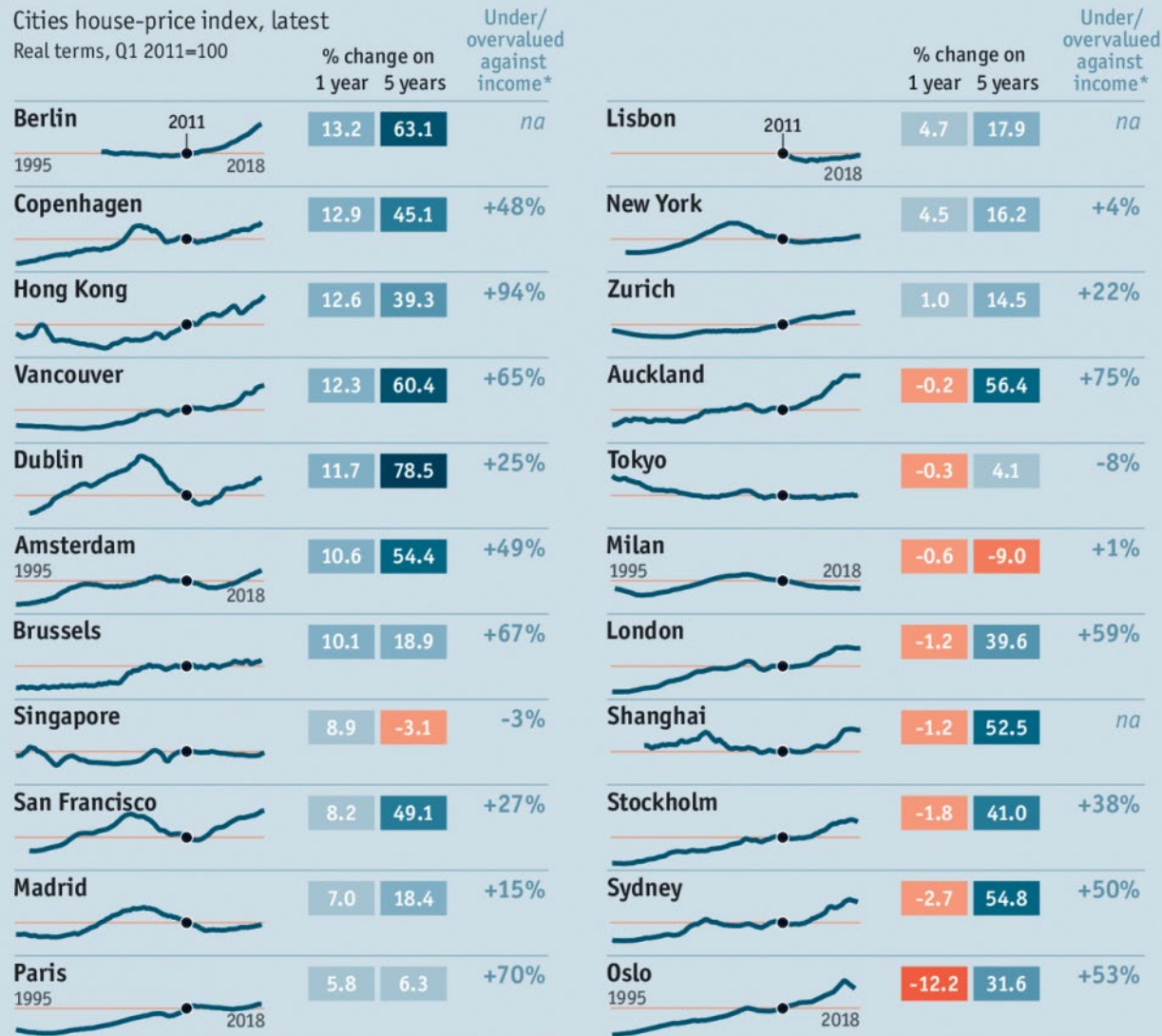
VÕRDSUS

Maailma 50 suurimat linnastut moodustavad 7% maailma elanikkonnast, kuid loovad 40% maailma majanduslikust kogutoodangust.

- The Economist 14.09.2018 -

Prime numbers

Cities house-price index, latest
Real terms, Q1 2011=100



Sources: Bank for International Settlements; Economist Intelligence Unit; Nomisma; Thomson Reuters; vdpResearch; Zillow; national statistics; *The Economist*

*Relative to long-run median disposable household income

The Economist

LINNADES ELAMINE ON KALLIS - 2011 vs 2018

*Pariisi, Hong Kong'i, New York'i and Londoni
keskmise leibkonnaga kulutatakse 41% oma sissetulekust
üürile, võrreldes 28% sissetulekust 30 aastat tagasi.*

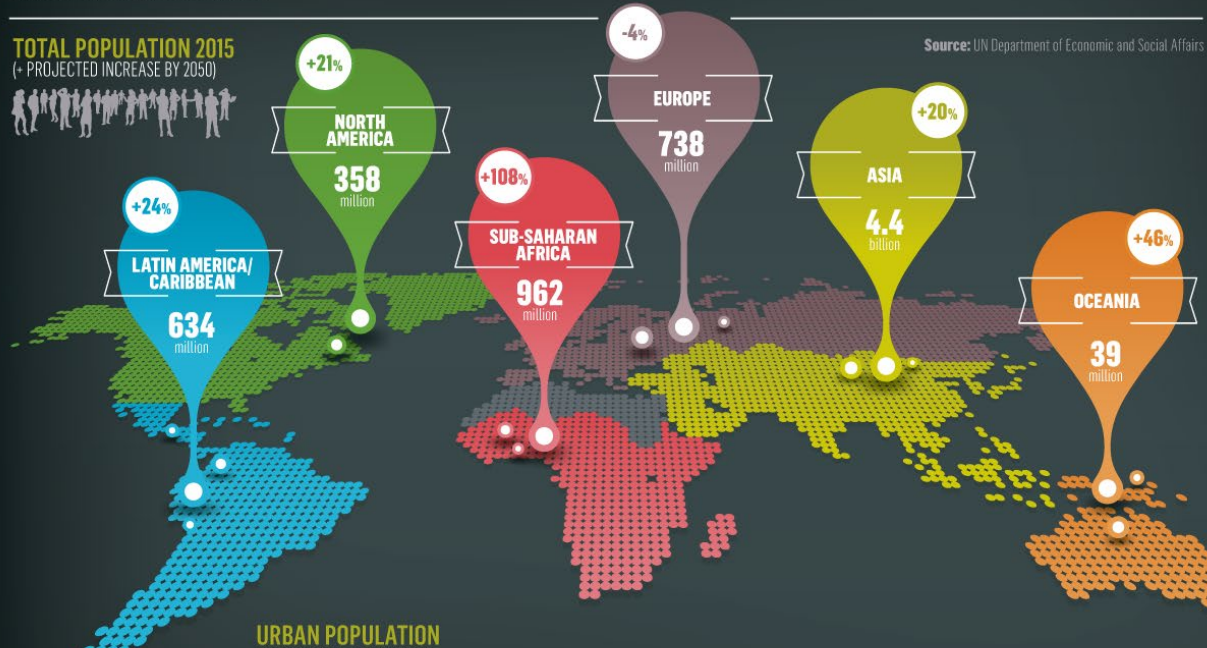
- The Economist 14.09.2018 -

THE RISE IN URBAN DWELLERS

Sub-Saharan Africa is urbanising faster than any other area on the planet and key cities like Nairobi, Johannesburg and Lagos are experiencing robust growth rates that far outstrip those of the region as a whole. With city dwellers tending to have more money to spend, this rapid urbanisation is creating investment opportunities in retail, financial services, technology and construction.



TOTAL POPULATION 2015 (+ PROJECTED INCREASE BY 2050)



Source: UN Department of Economic and Social Affairs

25%

the proportion of the world's population that will live on the continent of Africa by 2050. The current figure is 16%



50%

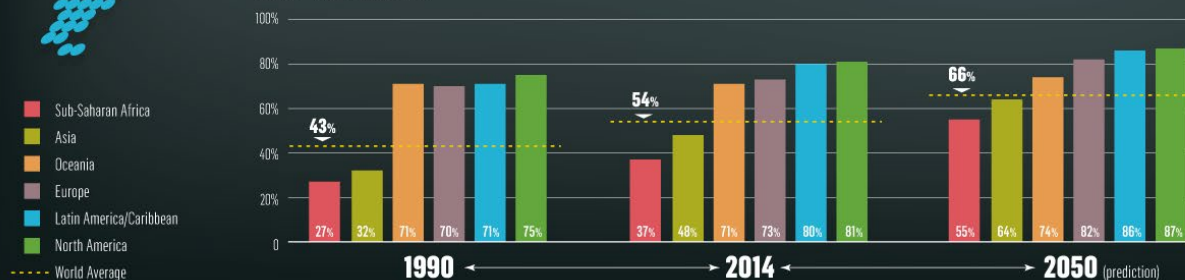
the proportion of Africans who will be living in urban areas by 2030. The figure for 2010 was 36%

\$\$\$

In the current economic environment, investors want areas where success is proven, growth is strong and will remain strong. Big African cities give you that.

- Jacob Kholi, a partner at private equity firm Abraaj

URBAN POPULATION AS % OF TOTAL POPULATION



LINNAELANIKE KASV EI PEATU



HELSINKI TIHENDAMINE - PASILA



KALASATAMA - KESKUSE LÄHEDASE ALA TIHENDAMINE



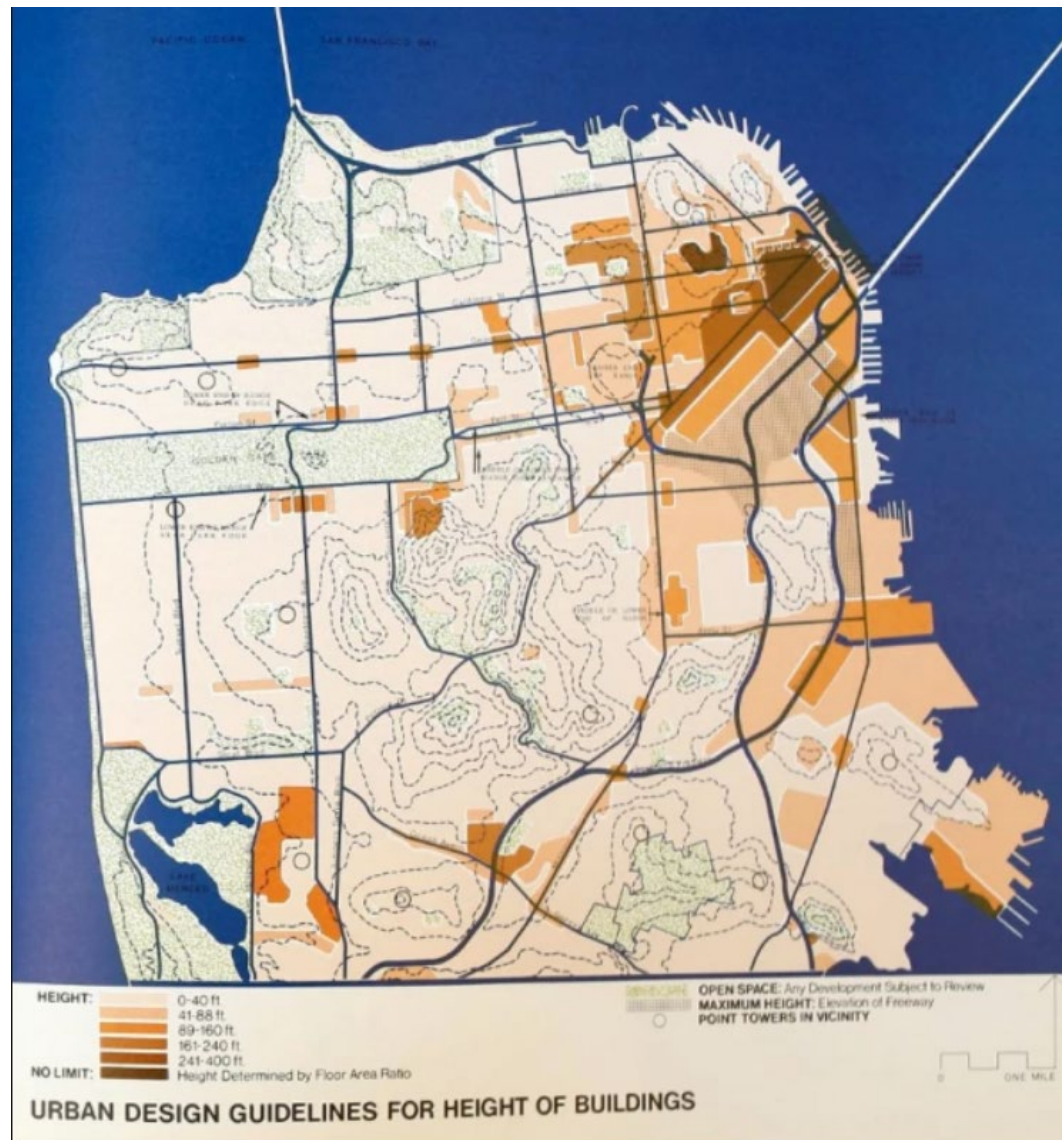
KALASATAMA - KESKUSE LÄHEDASE ALA TIHENDAMINE



MIXED-USE ÄRI- JA ELUPINNAD - 24/7 ELAV LINN



TIHEDAM ALA TRANSPORDISÖLME ÜMBER - VÄHENDAB UMMIKUID



SAN FRANCISCO - KÕRGUSTE PIIRANGUD AASTAST 1972

Restrictive planning and zoning rules lead to a chronic lack of supply in the places where people want to live.

- Financial Times 14.08.2018 -

*Manhattani uute elamispindade hinnast
poole moodustab reaalne ehitushind,
teise poole planeeringu menetlusest lisandunud hind.*

- Edward Glaeser 2005, Harvard University -

PLANEERINGU ETAPP	PLANEERIMISSEADUSET TULENEVAD KASAMISE NÕUDED	SOOVITUSED PAREMAKS KAASAMISEKS	SOOVITUSED KOOSPLANEERIMISE LÄBIVIMISEKS ERITI OLULISTE JUHTUMITE PIHUL
ALGATAMISE ETTEPÄNEK JA ALGATAMINE			
	ETTEPÄNEKU TEOSTAMINE		
		EKSIKSI ANALÜÜSIK ARVUTUSTE TEGEMINE	
	ALGATAMISE TEOSTAMINE		
EKSIKSI ANALÜÜSIK ARVUTUSTE TEGEMINE			
		PLANEERINGU KOOSTAMINE	
LÄHENDUS			
	KOOSKÕRUSTAMINE		
		VASTAVÕTMINE - KVALIFIKatsioonI KINNITUS ET PLANEERING VASTAV ALLI VÕL LINNA RUUMILISE ARENGU EESMÄRKODELE JA ET TA ON KONTROLLIUV PLANEERINGU VASTAVUST SEADUSETE JA MUUDE õIGUSAKTOIDE.	
	VÄLJAPANEK		
KÄIGU JÄRTOUD ETTEPÄNEKTELE JA VASTAVOETITELE VASTAMINE			
	VÄLISKI ARVUTEL		
TEAVE ANALÜÜSITAMISE TULEMUSTEST			
	KHESTAMINE JA SELLELE JÄRGENEV		
KHESTAMISE TEOSTAMINE			

DP = etteplaneering, DP = detailplaneering
 ■ = koostamine, ■ = täielikult detailitud, ■ = avaldamine



VABA TURG VÕI OLEMASOLEVATE ELANIKE MONOPOL?

Existing residents will always have an incentive to behave like monopolists and to attempt to reduce supply in order to boost the value of their own homes.

- Edward Glaeser 2005, Harvard University -



PLANEERIMISE OPTIMEERIMINE



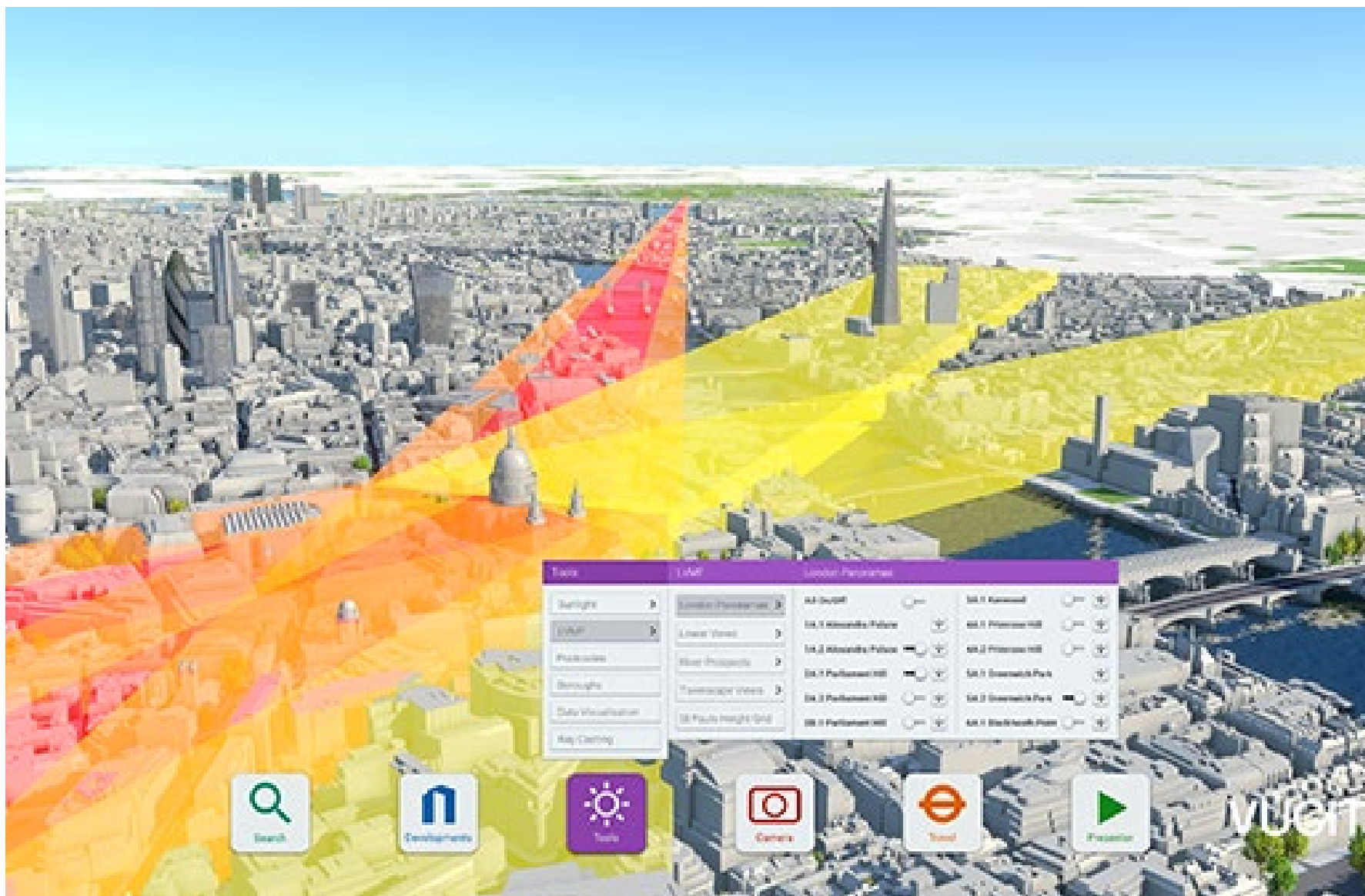
LINNA ANDMETE 3D VISUALISEERIMINE -VUCITY STARTUP



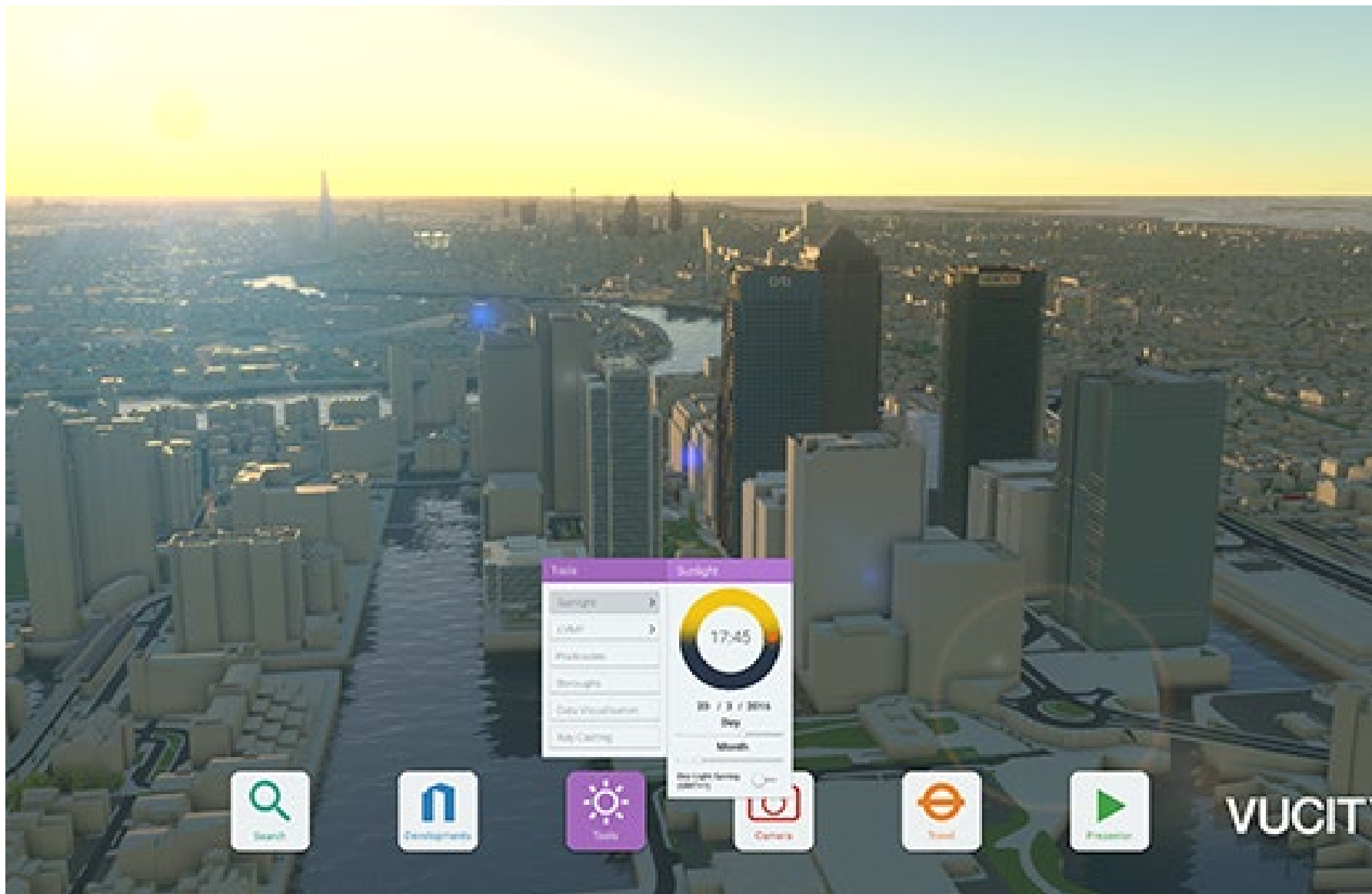
LISA, OTSI JA AVASTA UUSI JA OLEMASOLEVAID ARENDUSI



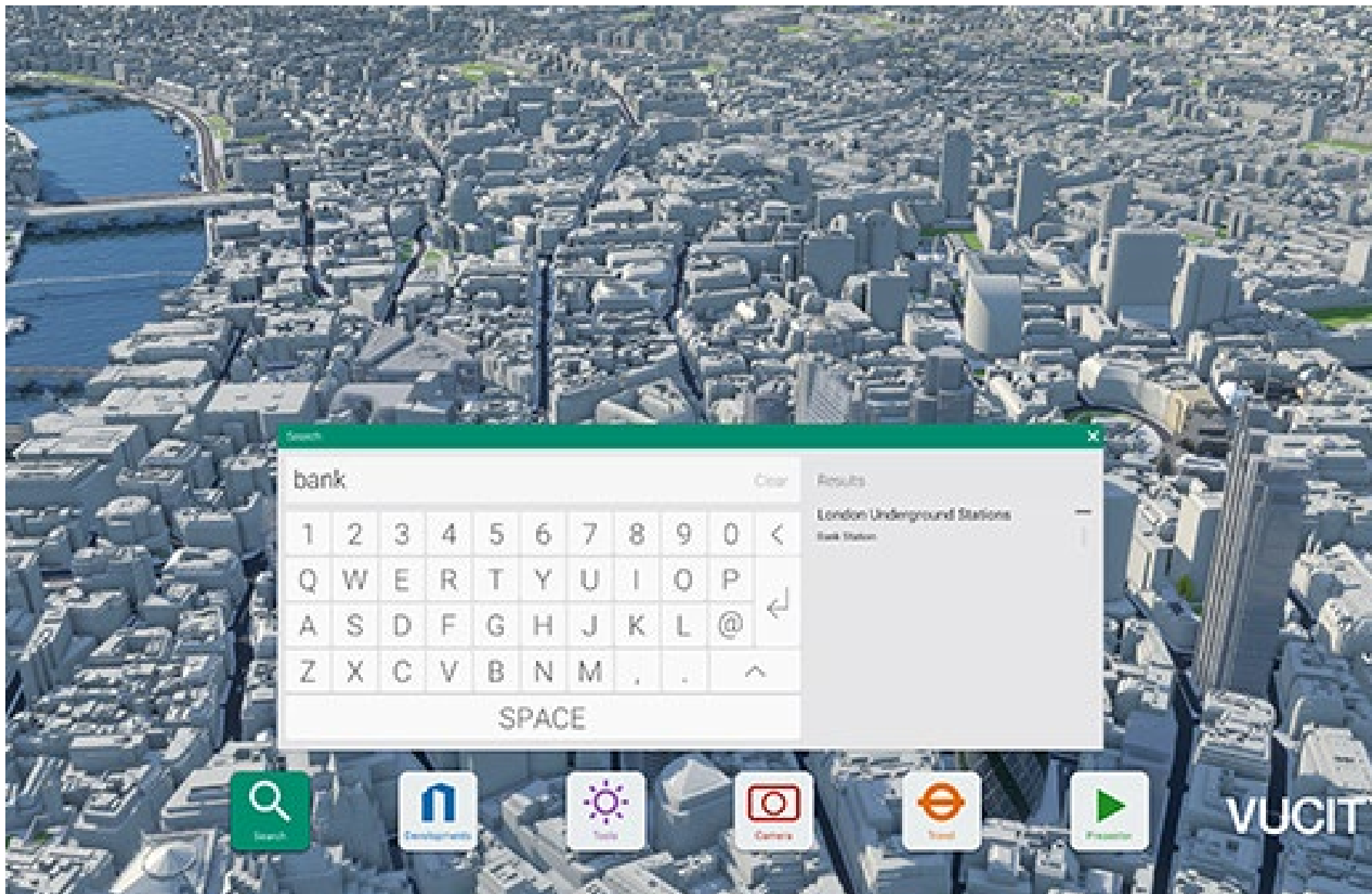
REAALAJAS TRANSPORDI INFO KIHISTUS



KAITSTUD VAATEKORIDORIDE VISUALISEERIMINE



PÄIKESEVALGUSE SIMULATSIION



OTSING AADRESSI, KATASTRITUNNUSE, ARENDUSE, PEATUSE JÄRGI



3D Object Query

Korkeus yli 30 m

Object Type

Building

Attribute Filter

Attribute bldg:measuredHeight

> 30

Geometry Filter

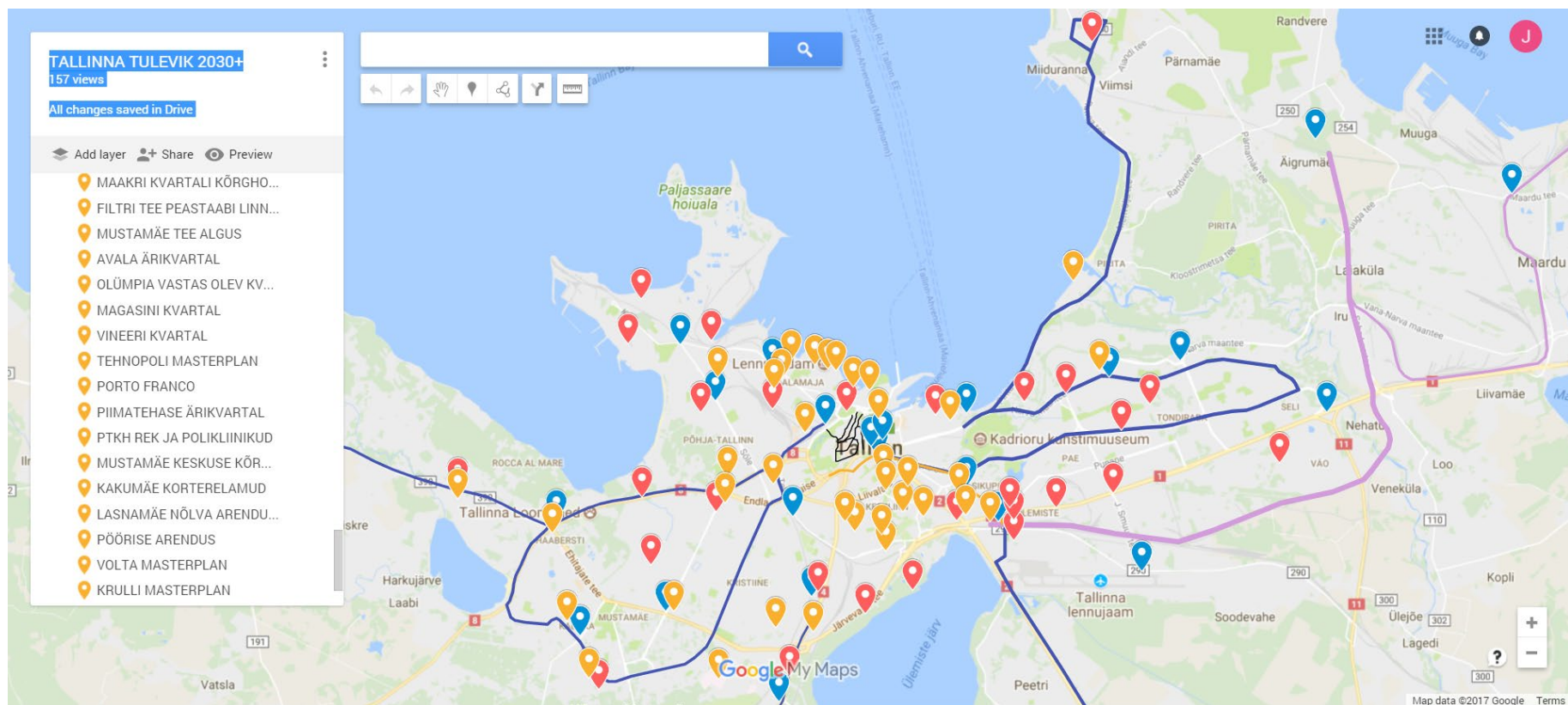
Start Query

Results: 283 Objects

Add Replace Zoom Clear



TOIMIV DIGITAALNE KESKKOND HELSINKI NÄITEL

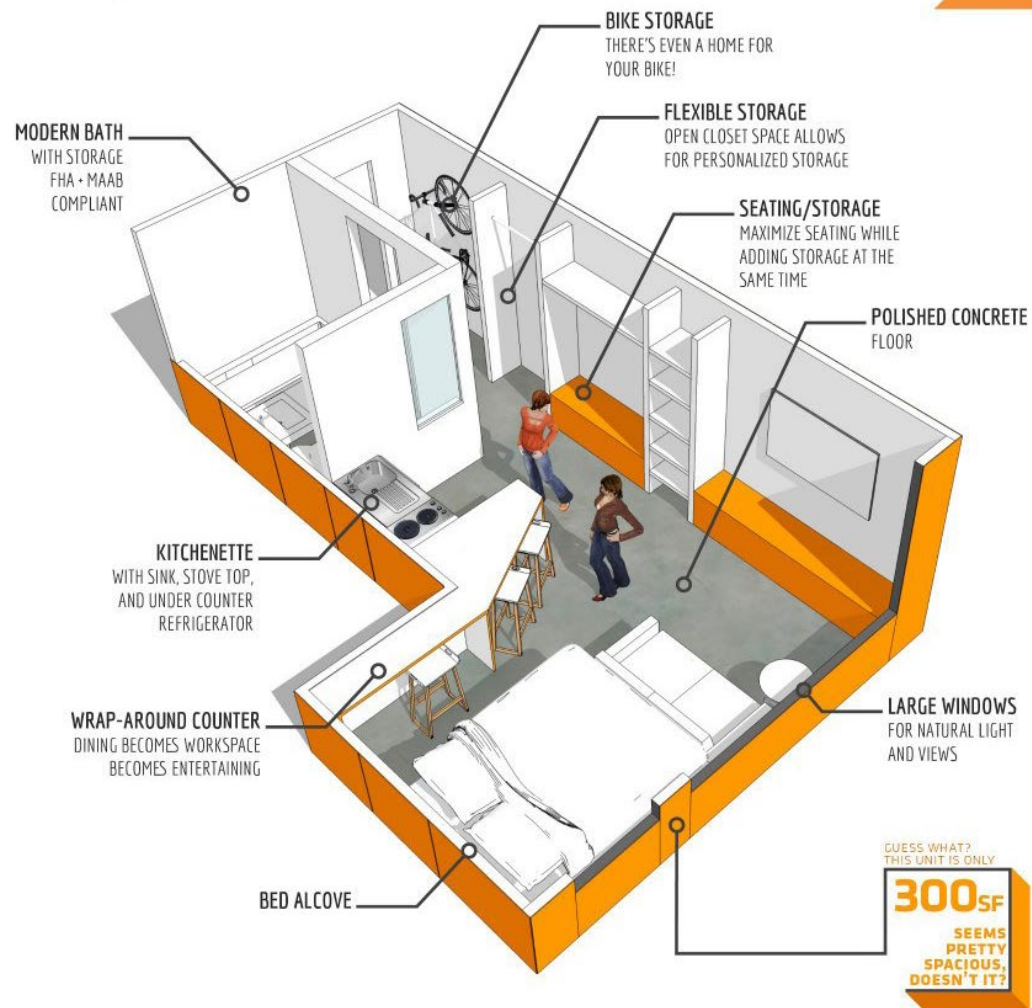


TULEVIKU TALLINN KUI TERVIKLIK VISIOON

A futuristic, brightly lit transit station with tracks and a large circular structure. The scene is dominated by a long, straight track leading towards a bright light at the end of the tunnel. On the left, there are arched windows looking out onto a cityscape. On the right, a large, complex structure of overlapping circular rings and spheres is visible, resembling a futuristic train or a large-scale architectural element. The overall atmosphere is clean, modern, and high-tech.

KUIDAS PLANEERIDA KOMPAKTSUST?

OK, WHAT'S A MICRO-UNIT?



MIKROKORTERID - KÕIK VAJALIK CA 33 M² PEAL



ÜHISKASUTUSES ALAD KORTERELAMUTES - ÜHISKÖÖK/KOHVIRUUM



KOOS TÖÖTAMISE RUUM



MIKROKORTERITE KOMBINEERIMINE ÄRIDE JA AVALIKU KASUTUSEGA



ÜHINE TÖÖTAMISE JA MIKROTOOTMISE RUUM



START-UP INKUBAATOR KUI LINN LINNAS



TRANSIT CENTER - SAN FRANCISCO

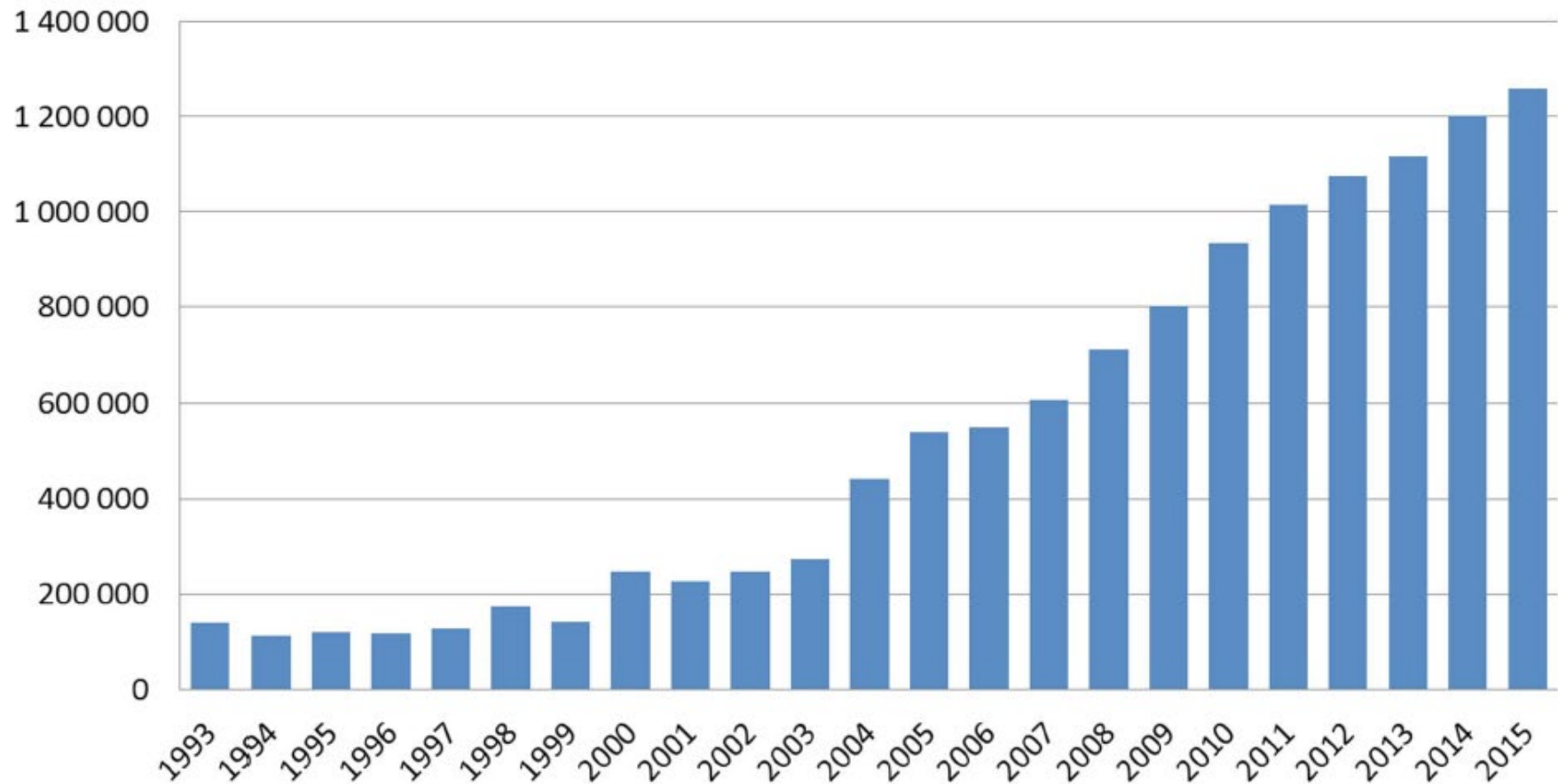


ÜHENDUVUS

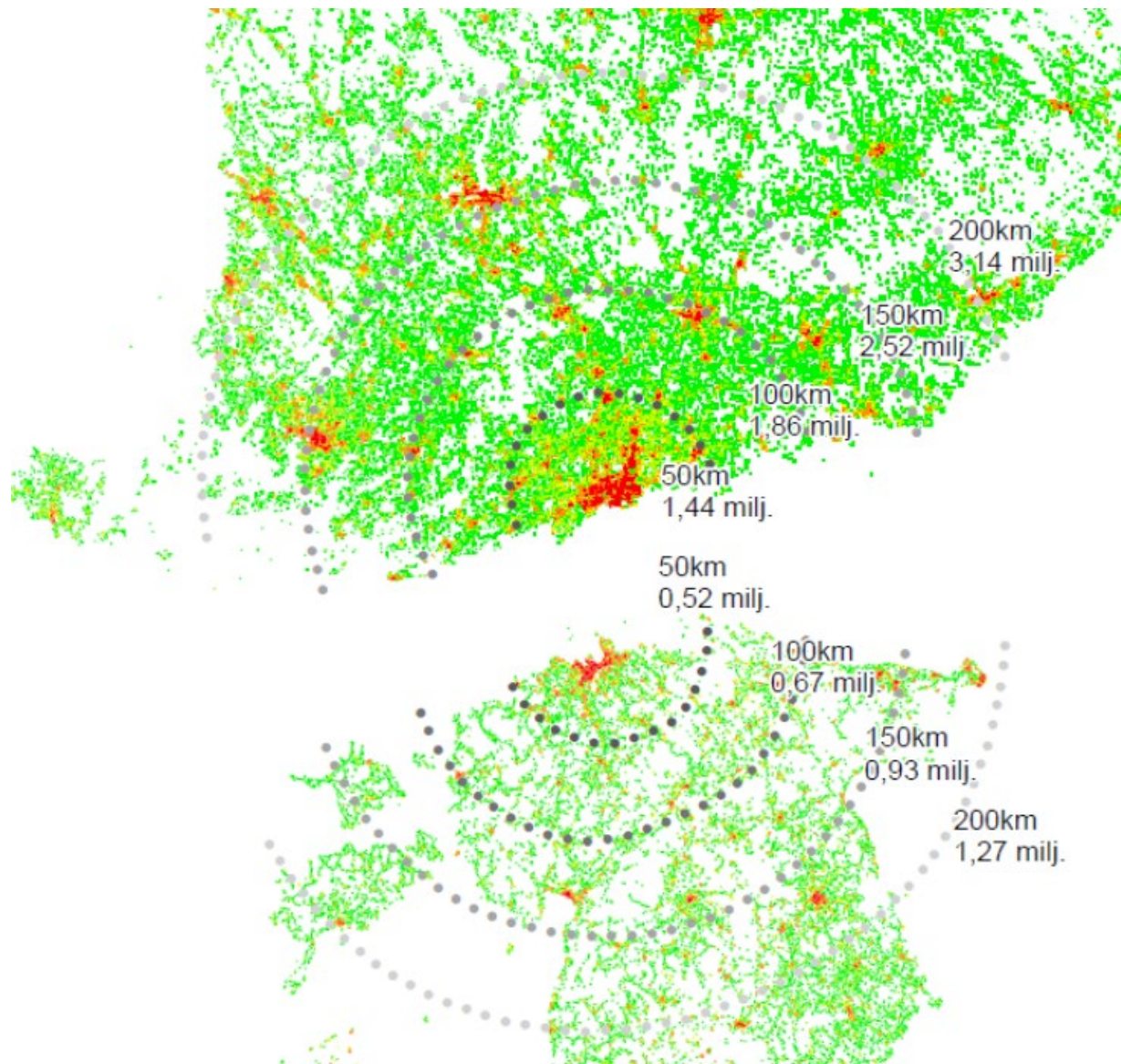
*Greater economic connectivity leads to the spread of knowledge and higher income growth for societies, but even more so for the **bottom 40 percent** of the income distribution.*

- Hans Timmer 2018, World Bank Chief Economist for Europe and Central Asia -

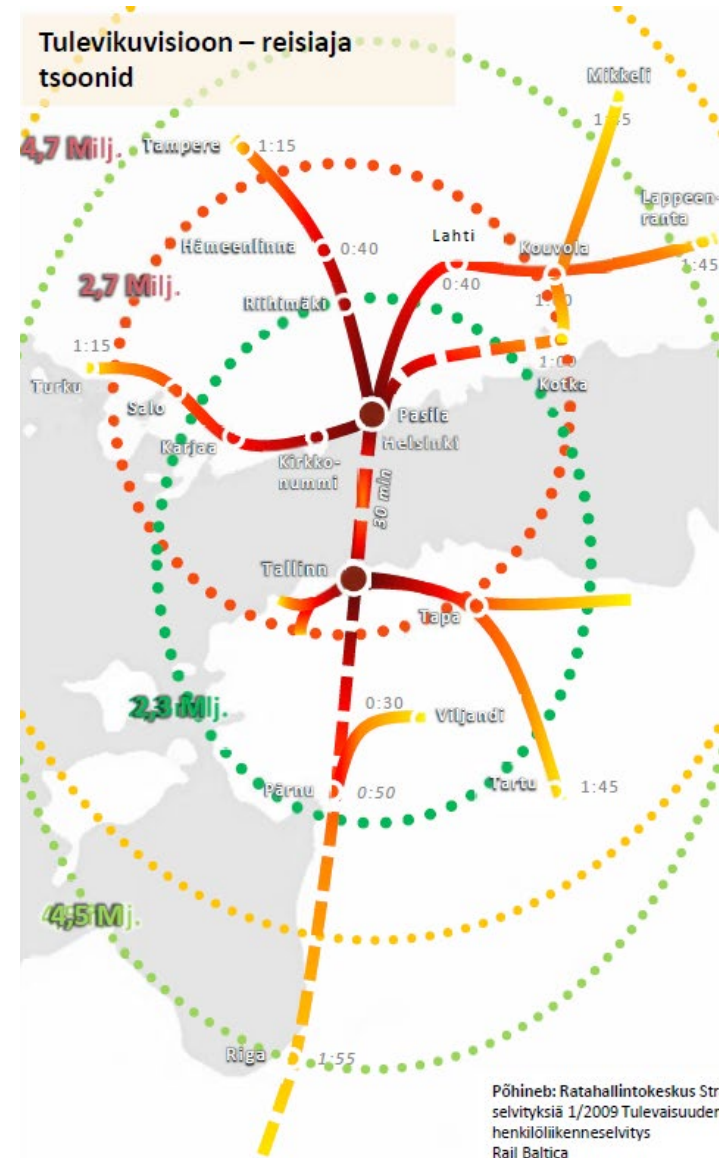
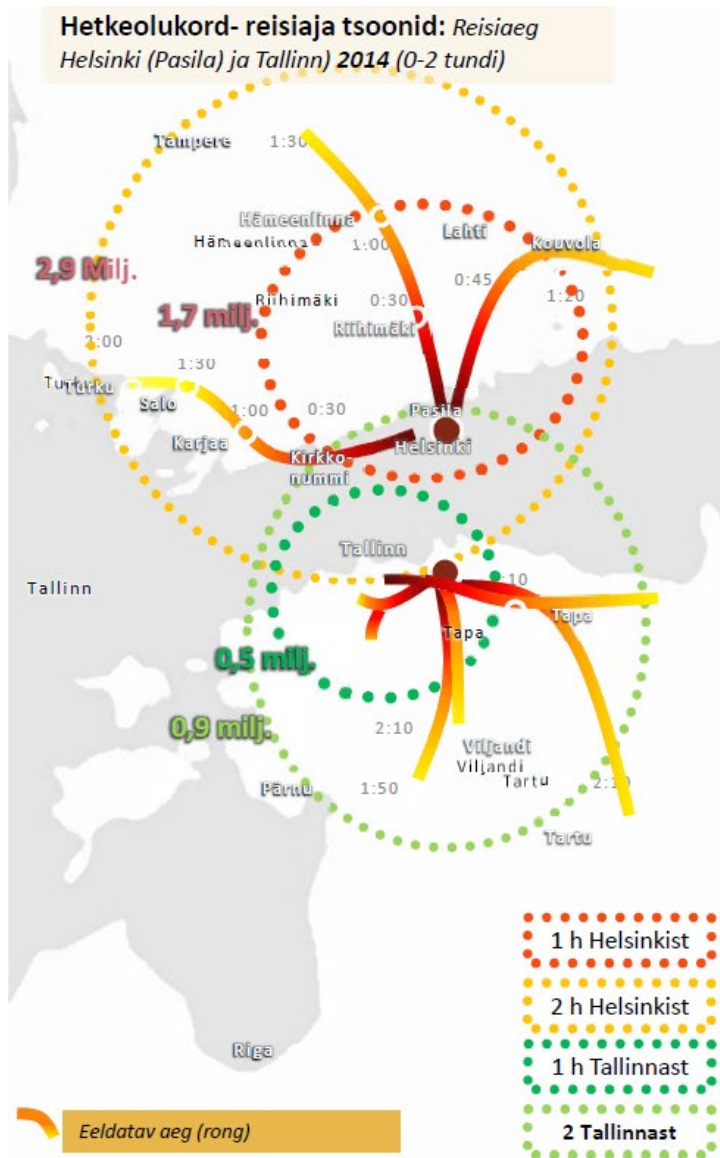
Passenger cars between Helsinki-Tallinn



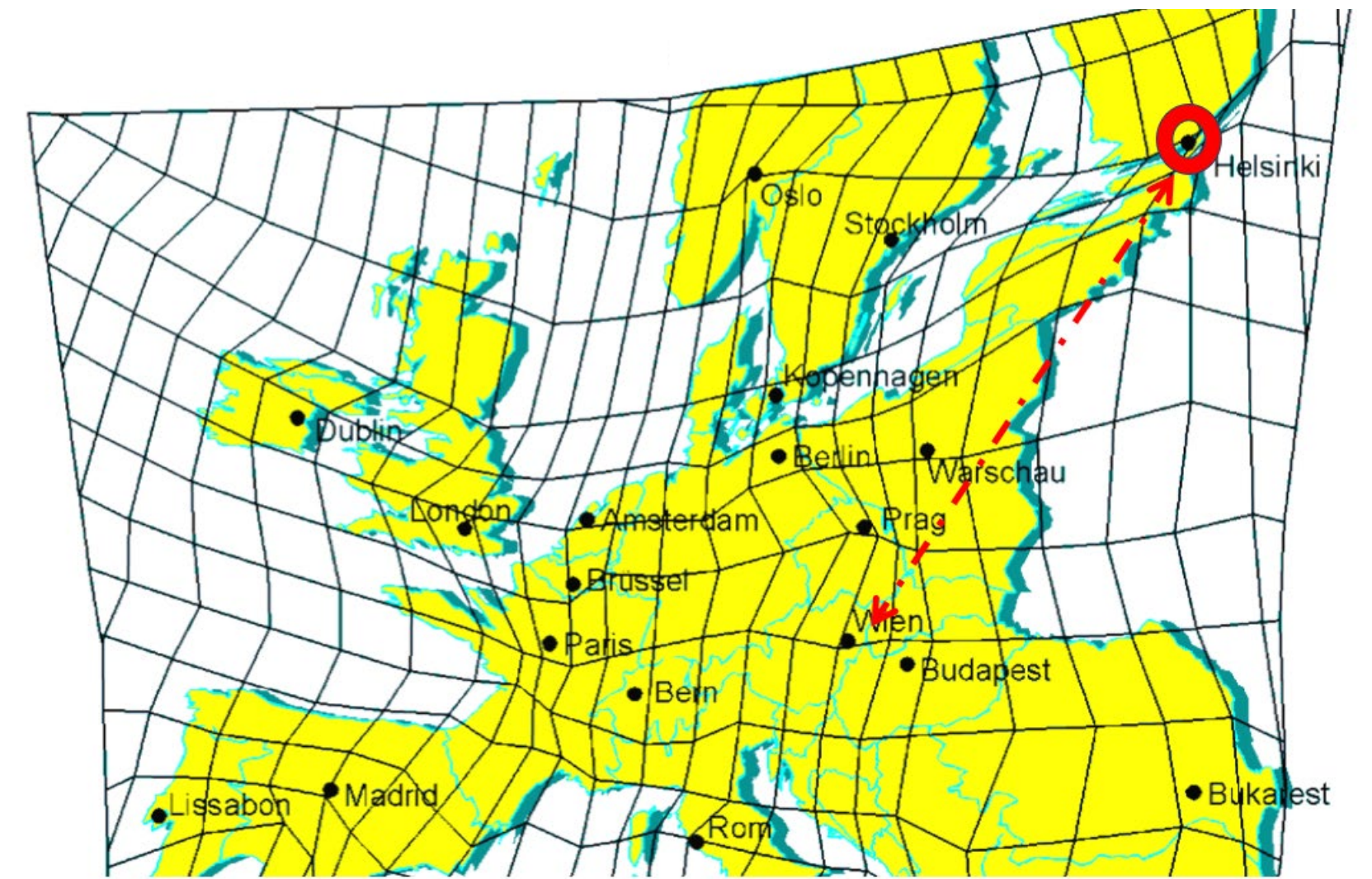
NÕUDLUSE PIDEV KASV



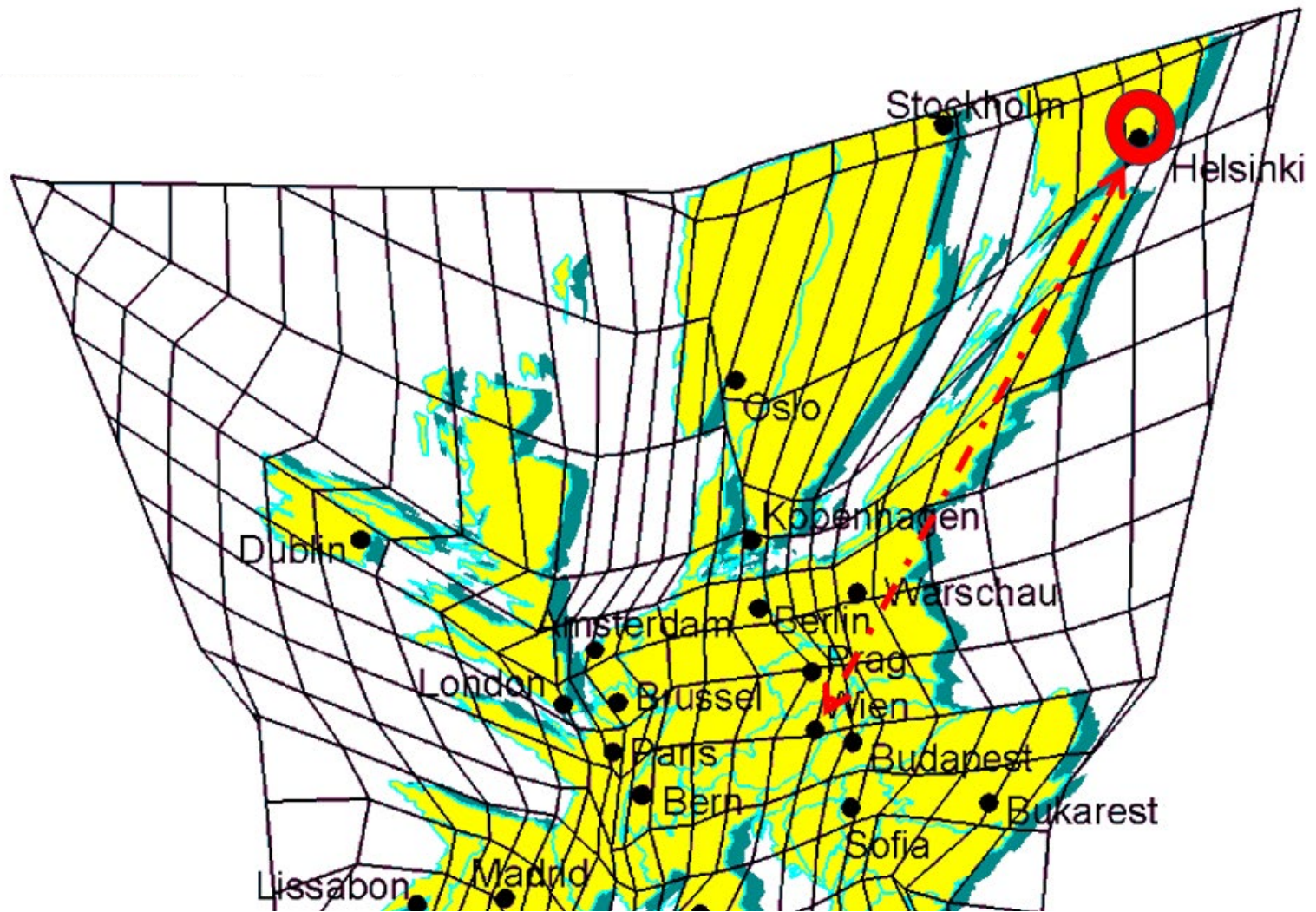
5 MILJONIT INIMEST 200 KM RAADIUSES



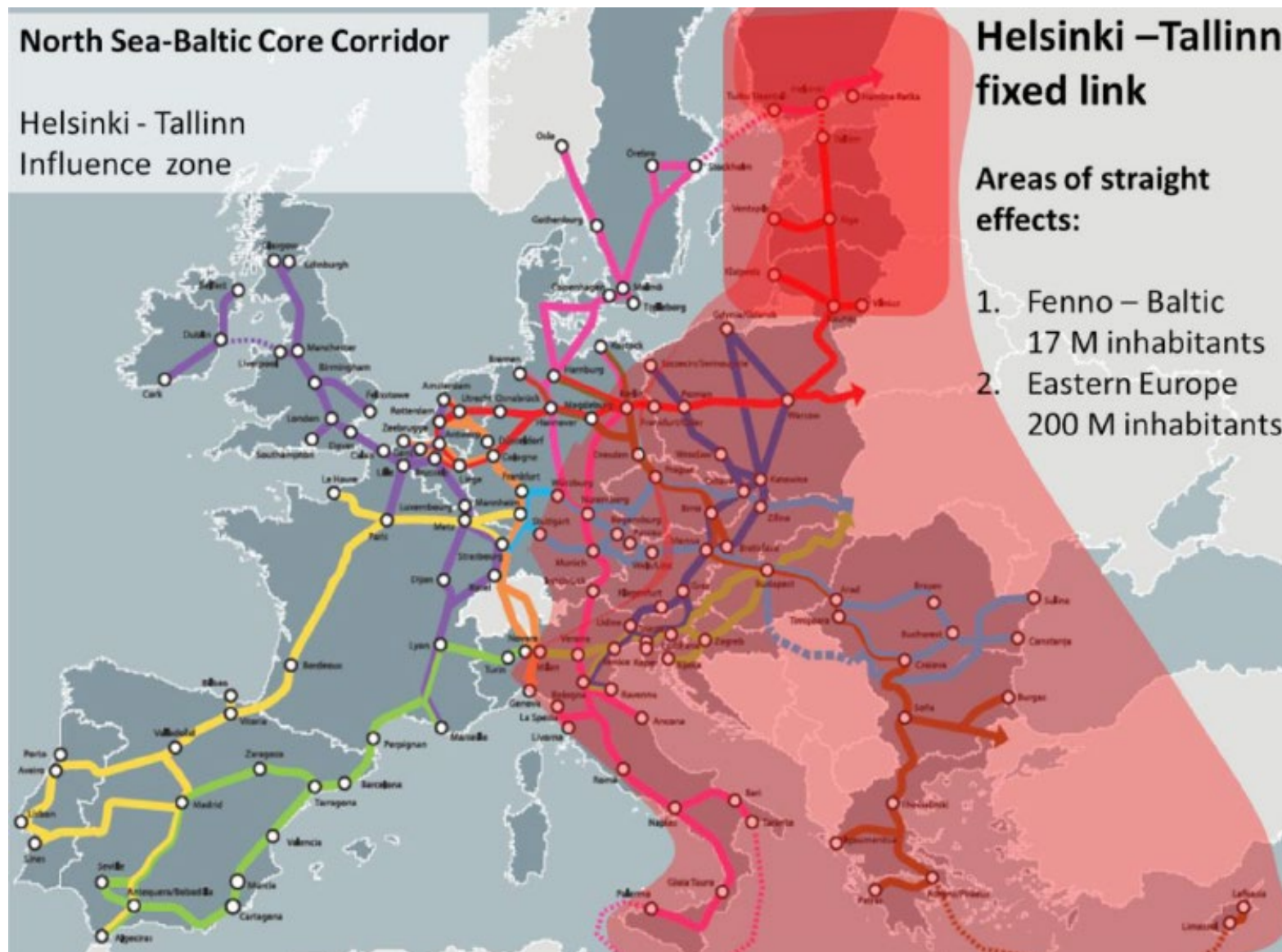
5 MILJONIT INIMEST 200 KM RAADIUSES



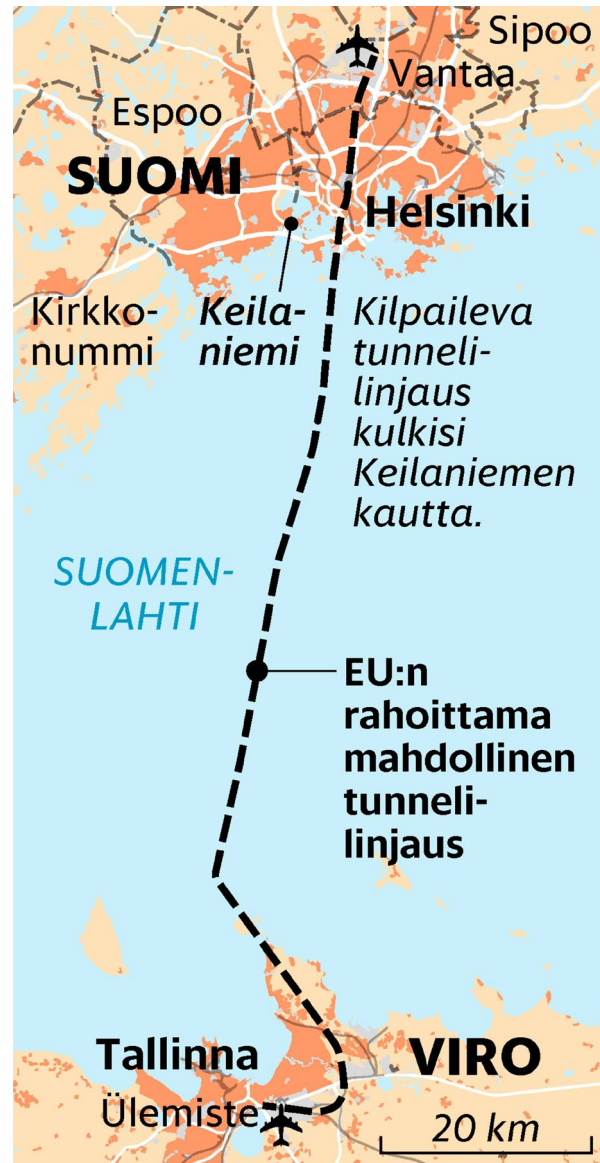
ME LOEME MINUTEID, MITTE KILOMEETREID - 1993



SUHTELINE KAUGUS PIGEM KASVAB - 2013



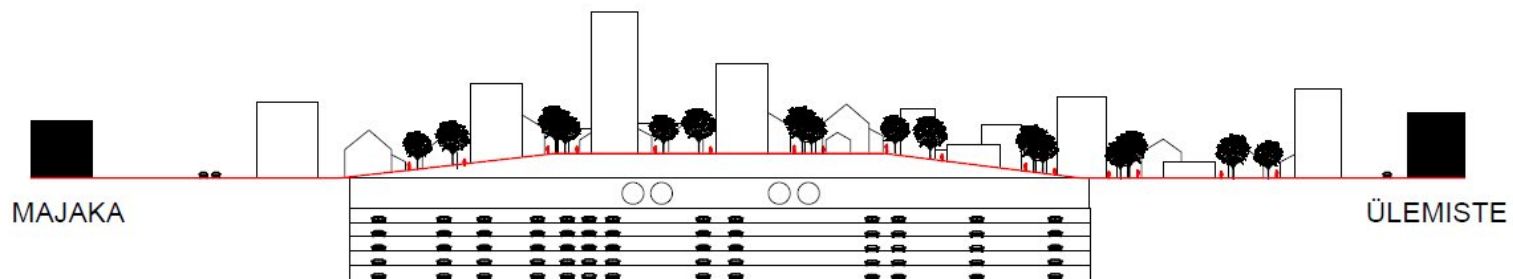
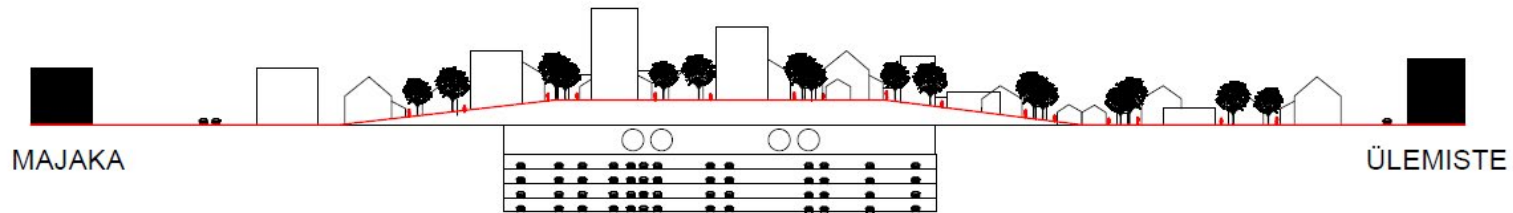
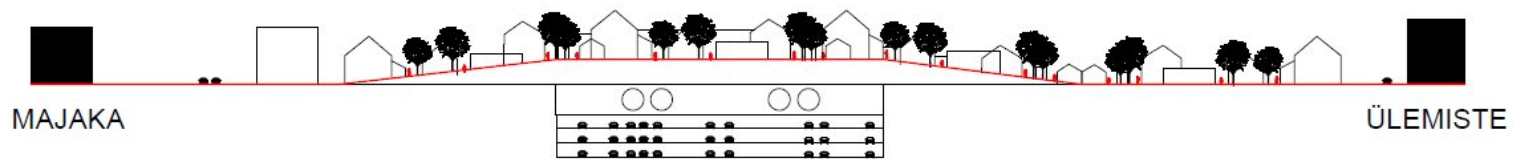
PAREM LIGIPÄÄS EUROOPA TURULE



LENNUJAAMAST LENNUJAAMA



ÜLEMISTE ALA TIHENDAMINE

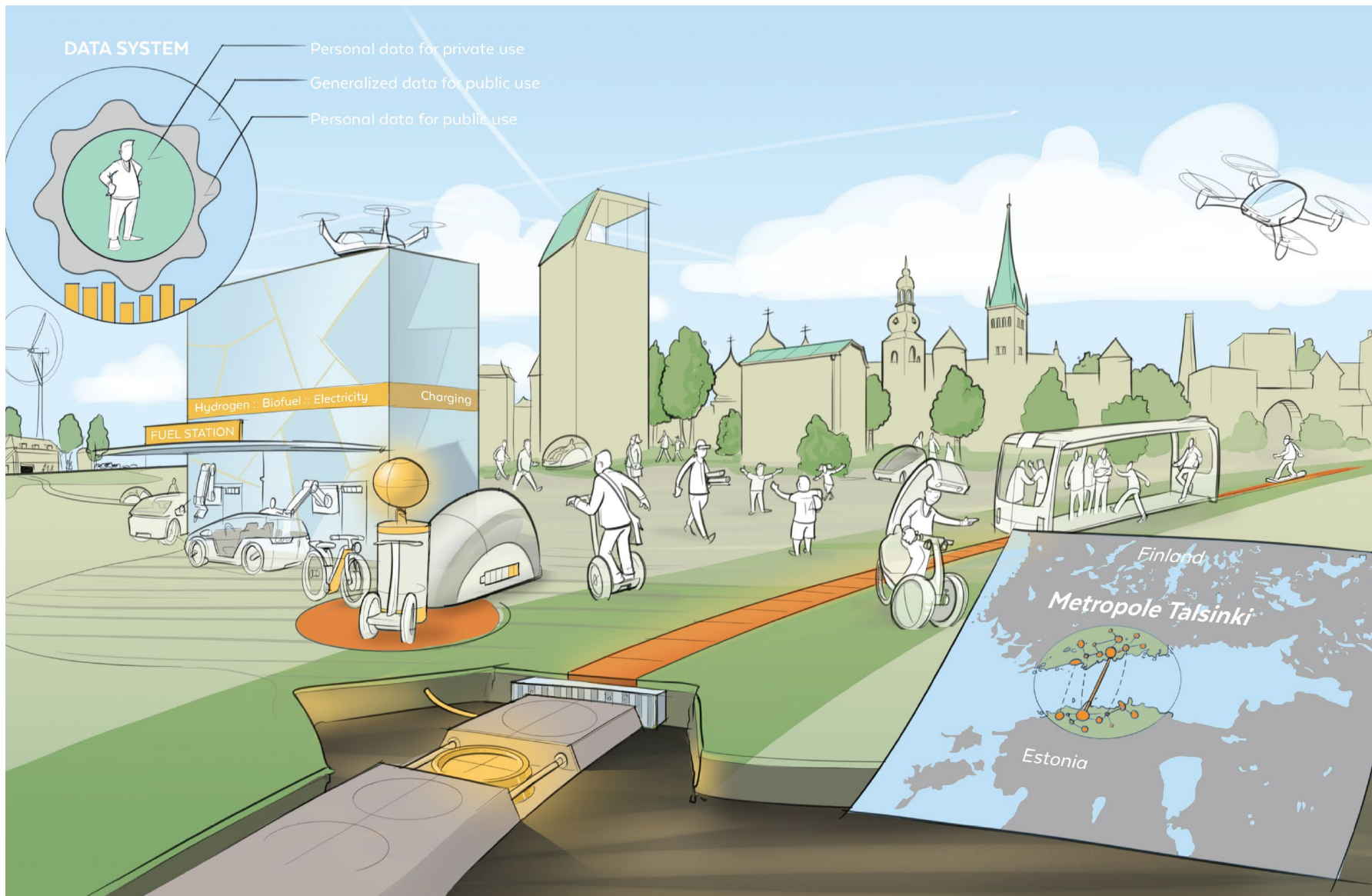


SCENARIOS FOR DIFFERENT DENSITIES

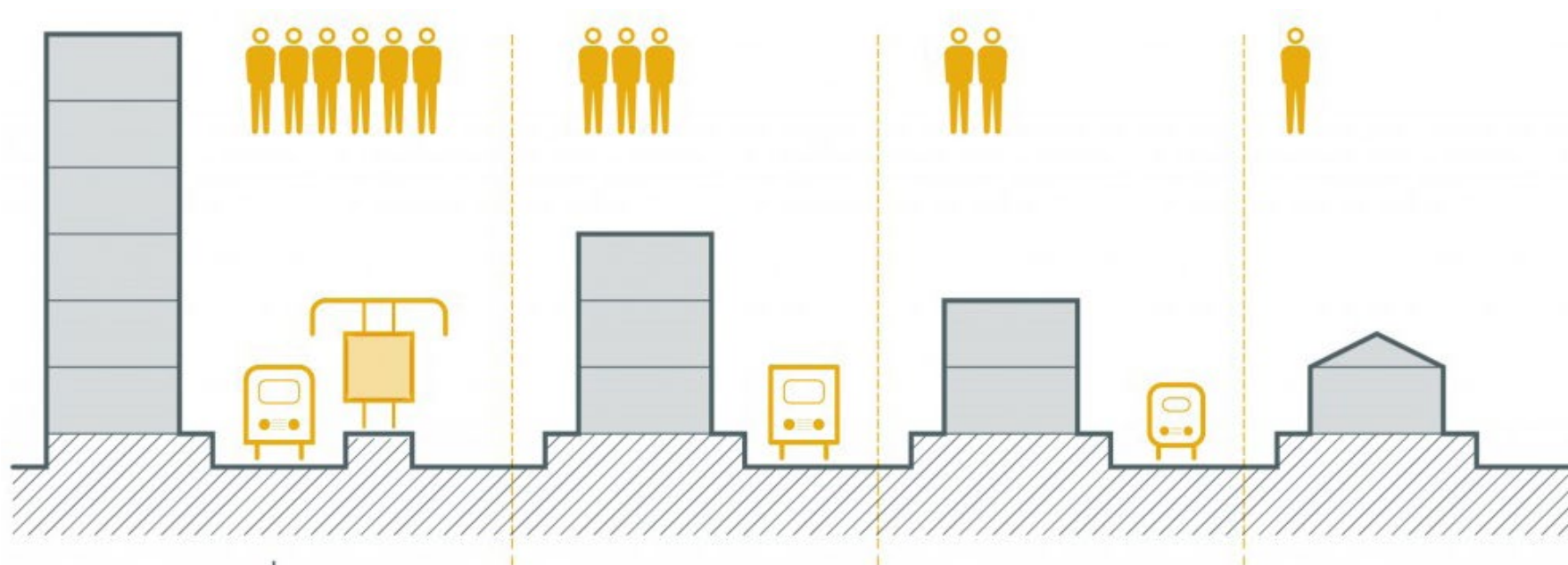
TERMINAL JA PARKIMINE MAA-ALLA - INIMMÕÖTMELINE LINN

A futuristic, brightly lit transit station with tracks and a large circular structure on the right. The scene is dominated by a long, straight perspective of a train platform. On the left, there are arched windows looking out onto a cityscape. On the right, a large, complex structure of overlapping circular rings and spheres, resembling a stylized eye or a futuristic tunnel entrance, is illuminated with a warm, golden light. The tracks lead towards a bright light at the end of the platform. The overall atmosphere is clean, modern, and high-tech.

VAJADUSPÕHINE LINNATRANSPORT



LIKUMISVIISIDE VARIATIIVSUSE KASV



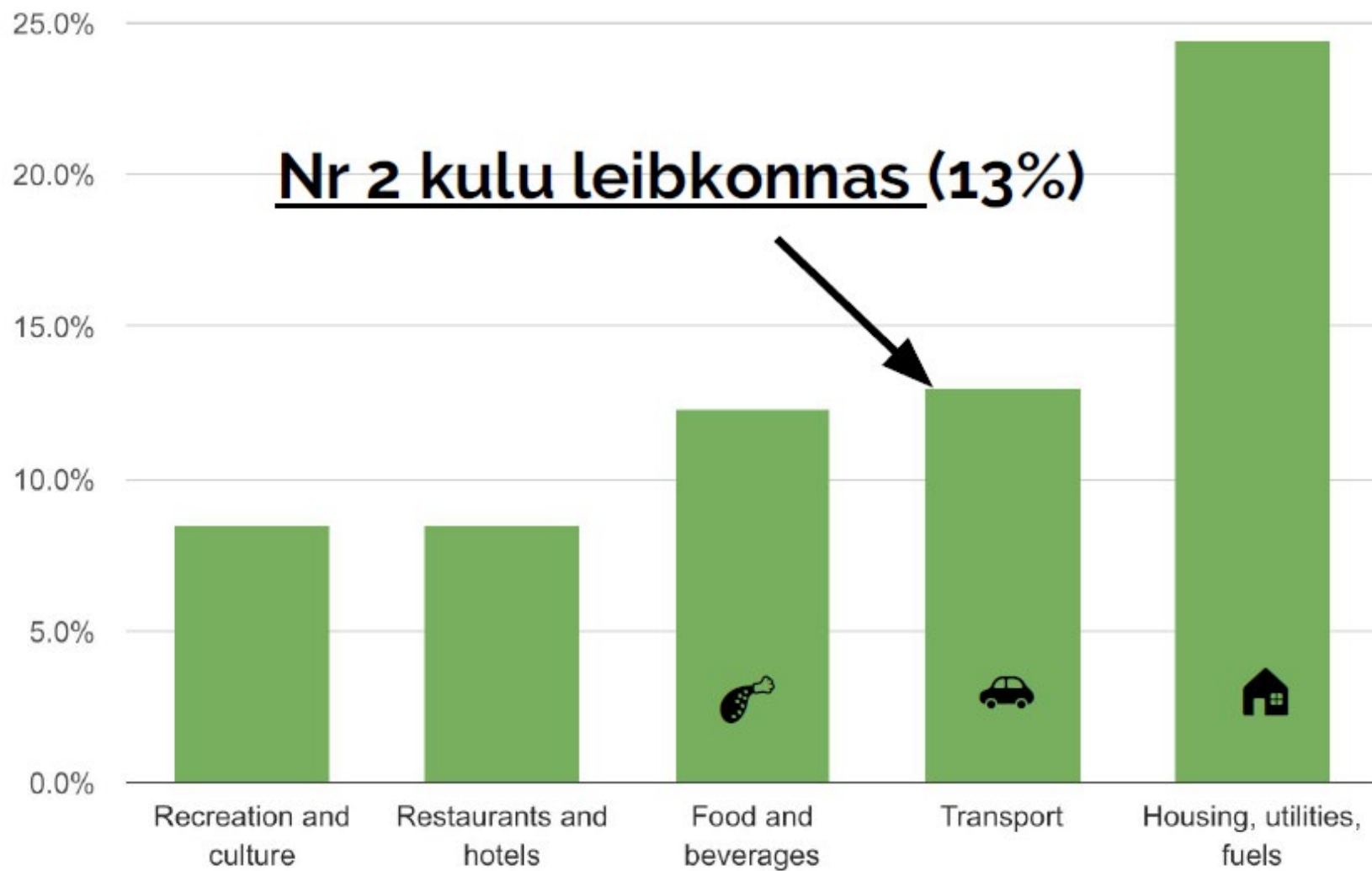
 EMBARQ

 WORLD
RESOURCES
INSTITUTE

www.thecityfix.com | www.embarq.org | www.wri.org
EMBARQ helps cities make sustainable transport a reality.

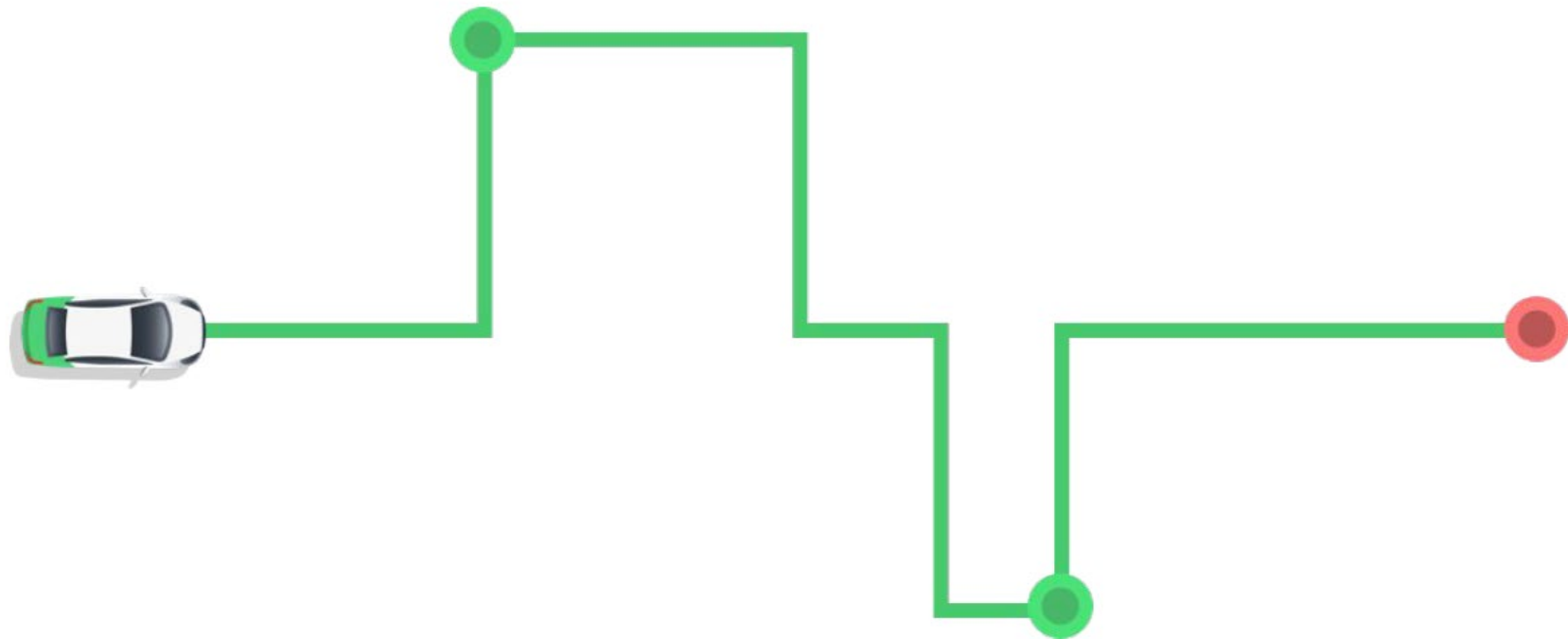
TIHE LINN TÄHENDAB ÜHISTRANSPORTI

“Rikas riik pole see, kus vaesed sõidavad autoga,
vaid see, kus rikkad sõidavad ühistranspordiga.”



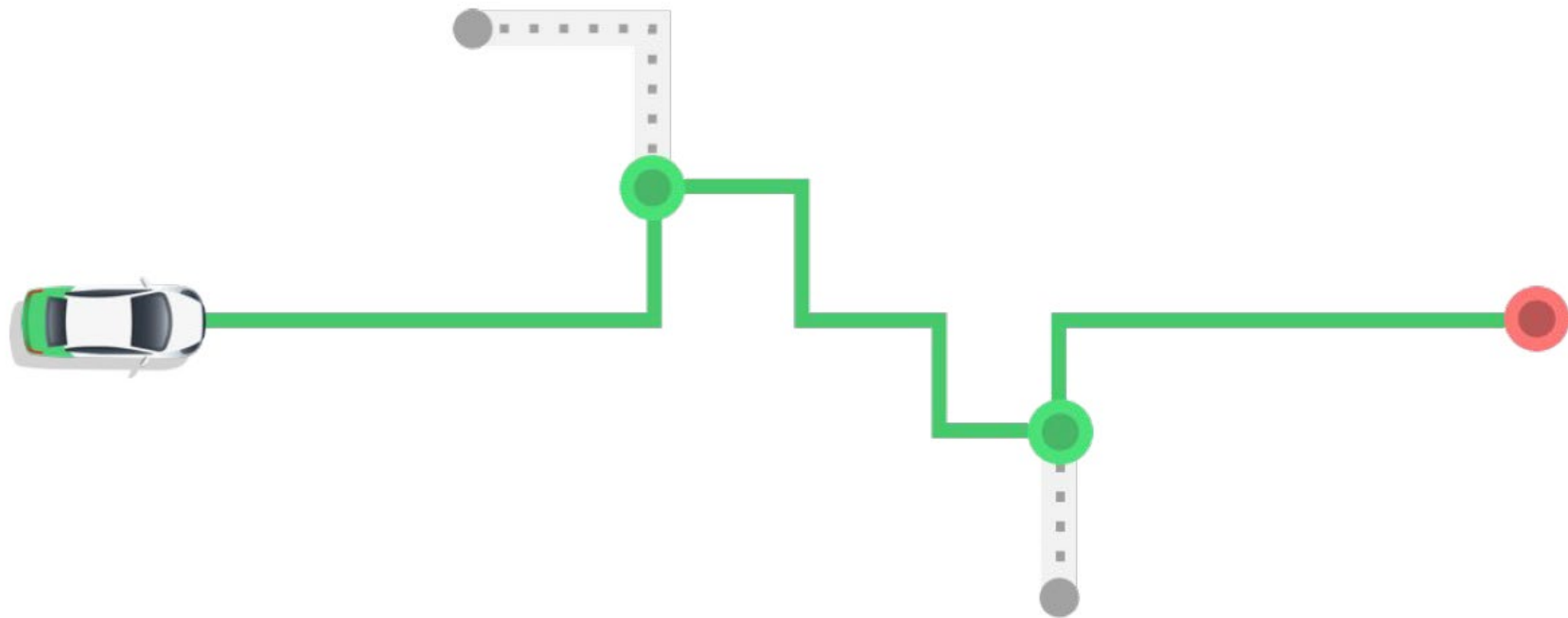
RAHA TRANSPORDI ALT VABAKS

3. Lihtne sõidujagamine



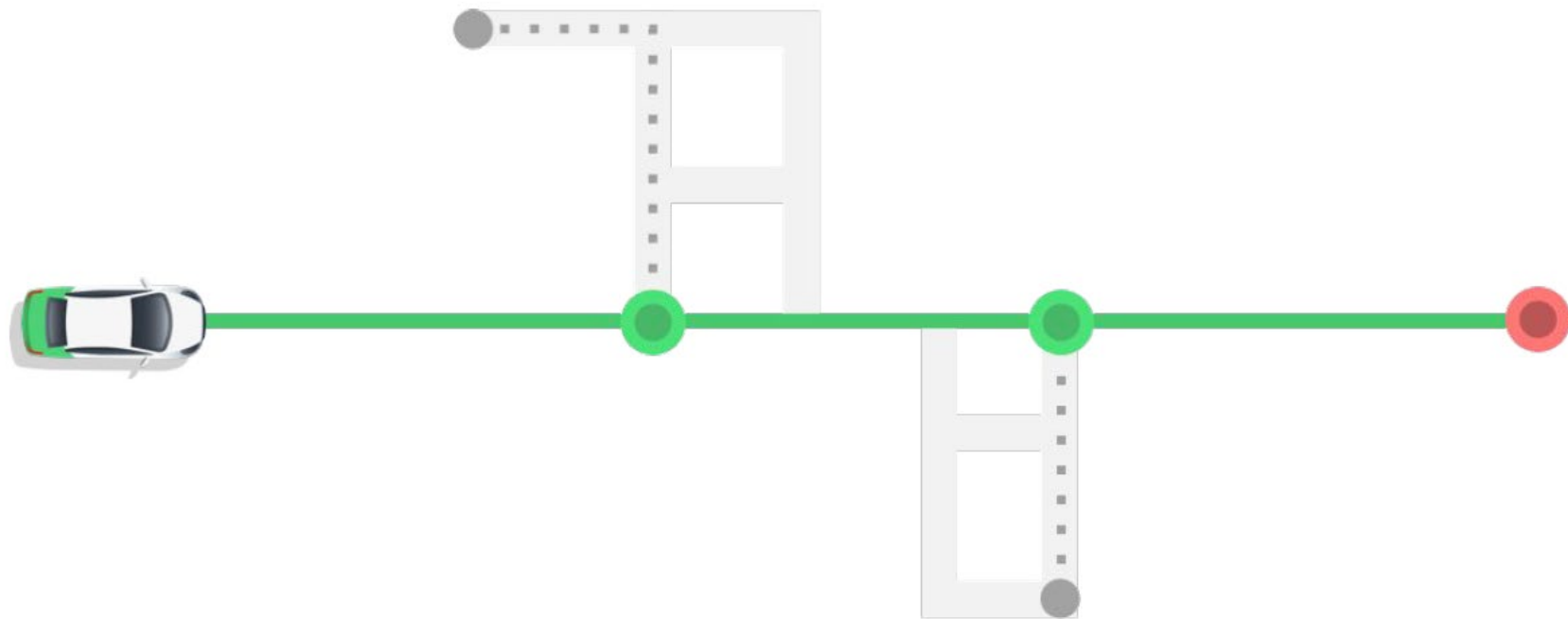
SÕIDUJAGAMINE ON LIIKUMAS UUDE FAASI

Kombineeritud jagamine

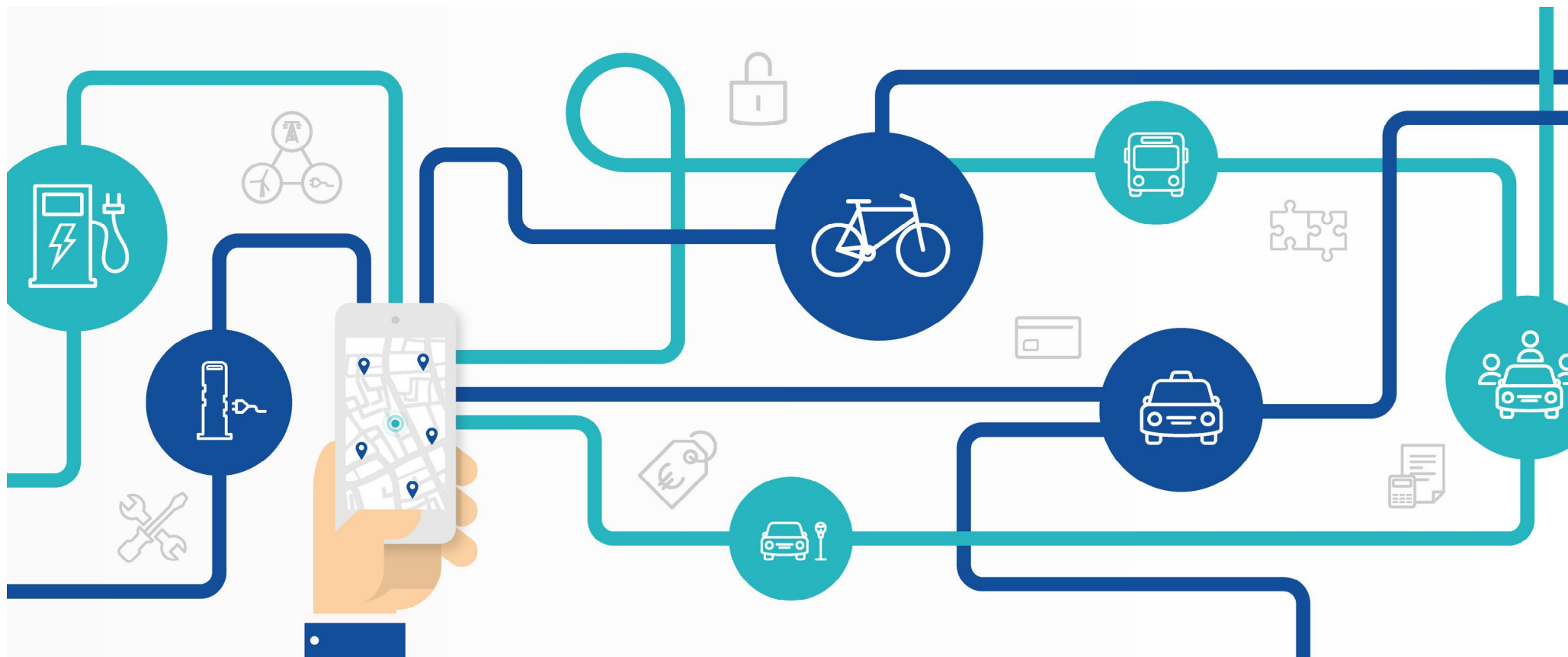


SÕIDU KOMBINEERIMINE JALUTAMISE/RATTASÕIDUGA

Sõidujagamine marsruudil



KINDEL MARSRUUT TÕSTAB KIIRUST



MOBLITY AS A SERVICE - ÜKS PLATVORM LINNAS LIIKLEMISEKS



FOOKUSE LIIKUMINE NELJA-RATTALISELT KAHE-RATTALISELE

Ei ole väga mõistlik kasutada ühe inimese viimiseks ja paarikilomeetriseks sõiduks autot, mis kaalub mitu tonni.

- Markus Villig 2018, Taxify asutaja -

A futuristic train station with a glowing train and a city view through arched windows. The scene is bathed in a warm, golden light, suggesting a sunrise or sunset. The train is sleek and modern, with a prominent circular light on its side. The station platform is clean and modern, with a tactile paving strip leading towards the train. The background shows a cityscape through the arched windows.

ISEJUHTIV LINN

ANDMETE VABA LIIKUMINE LINNADES

- "OPEN GOVERNMENT" KÕIK LINNAS TEKKIVAD ANDMED ON KÕIGILE VABALT KÄTTESAADAVAD
 - "ON-DEMAND" TÄNAVAVALGUSTUS, MIS JÄLGIB INIMESTE TIHEDUST
 - ÜHISTRANSPORDI LIINIDE MUUTUS REAALAJAS
 - KOGU INFO TARKADEL LIIKLUSMÄRKIDEL, TABLOODEL, APP'IS
 - SÕIDUJAGAMISE, BUSSIDE, RATTASÕIDU SUJUV KOMBINEERIMINE
 - MITMESUUNALINE ELEKTRIVÕRK - VÕIMSUSE ÜMBERJAGAMINE VAJADUSPÕHISELT
 - TÄNAVATE AUTOMAATNE MUUTSUUNALISUS
 - SENSORID NIISKUSE, TEMPERATUURI, VALGUSE JA KÕIGE JAOKS



PIIRIDETA ÜHENDUVUS - SpaceX VISIOON 5G SATELLIIT-INTERNETIST

VABADUS

VÕRDSUS

ÜHENDUVUS

VABADUS

VALIDA TEENUSEPAKKUJA

VÕRDSUS

KÕIGILE TURUOSALISTELE

ÜHENDUVUS

PIIRIDEST VABAKS

