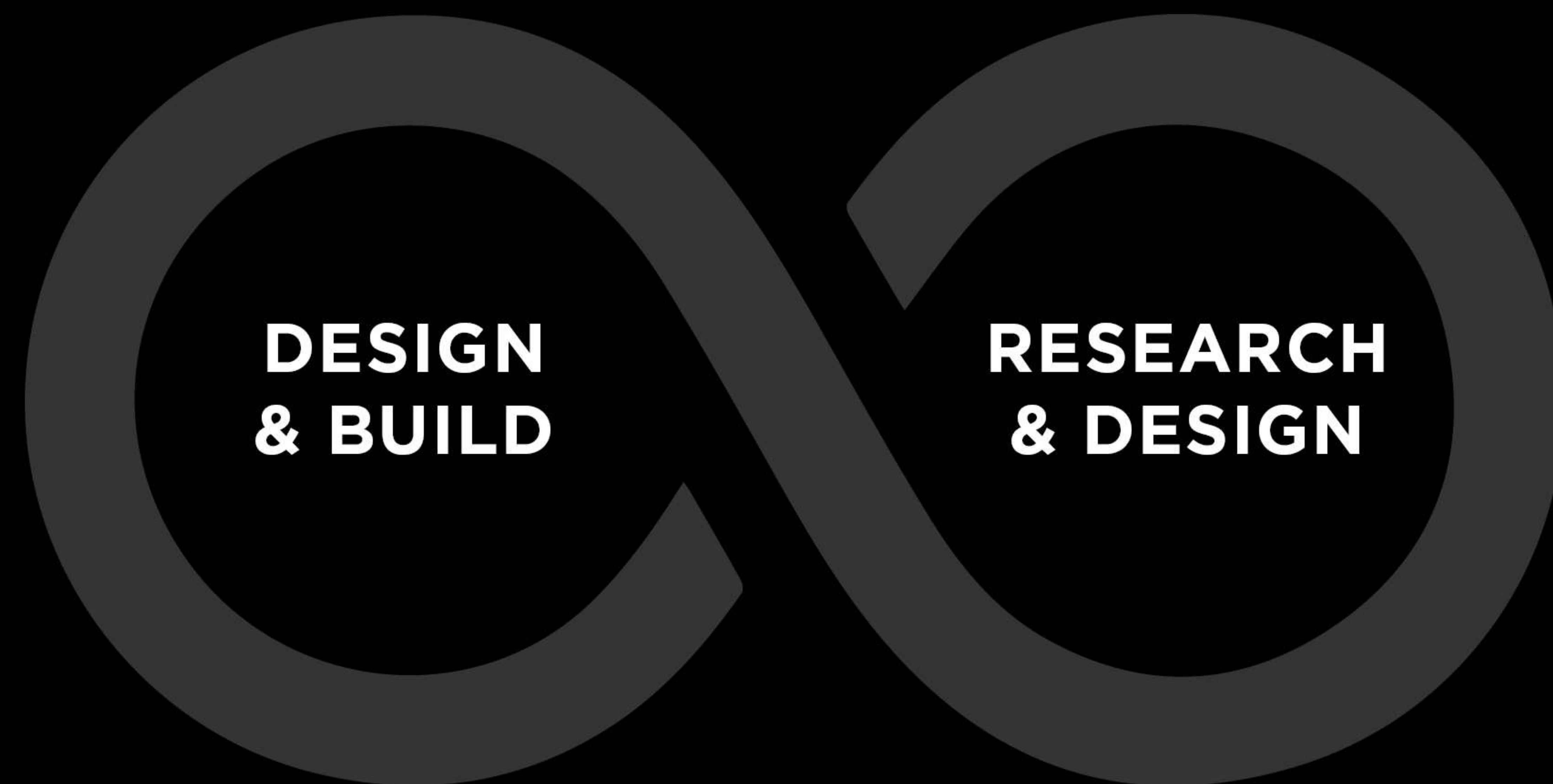


BUILDING ECOLOGY EGO TO ECO

Daniel Veenboer | EFFEKT | WOHNBAUFORUM | 25.11.2019

EFFEKT

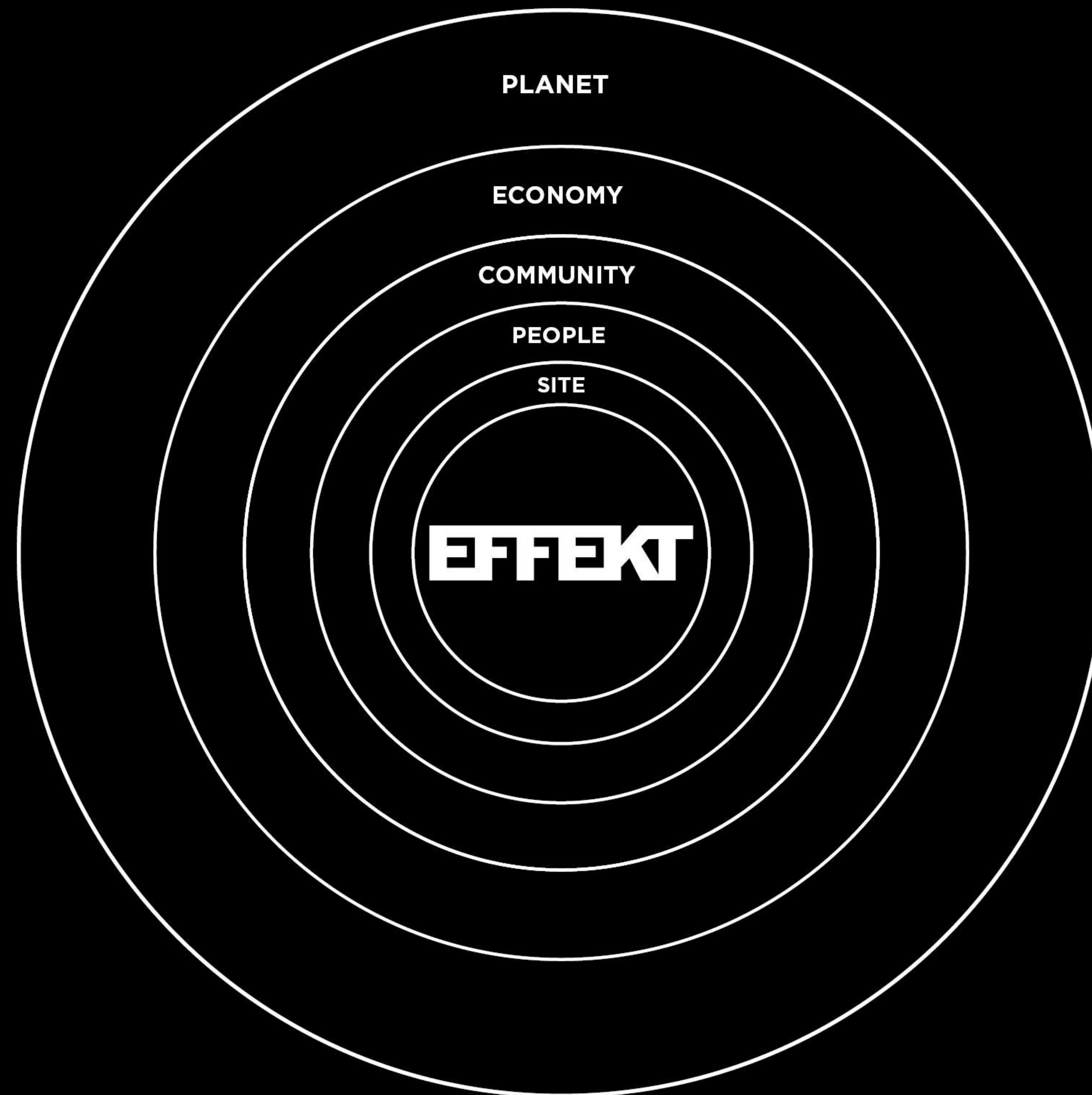
ARCHITECTURE & URBANISM



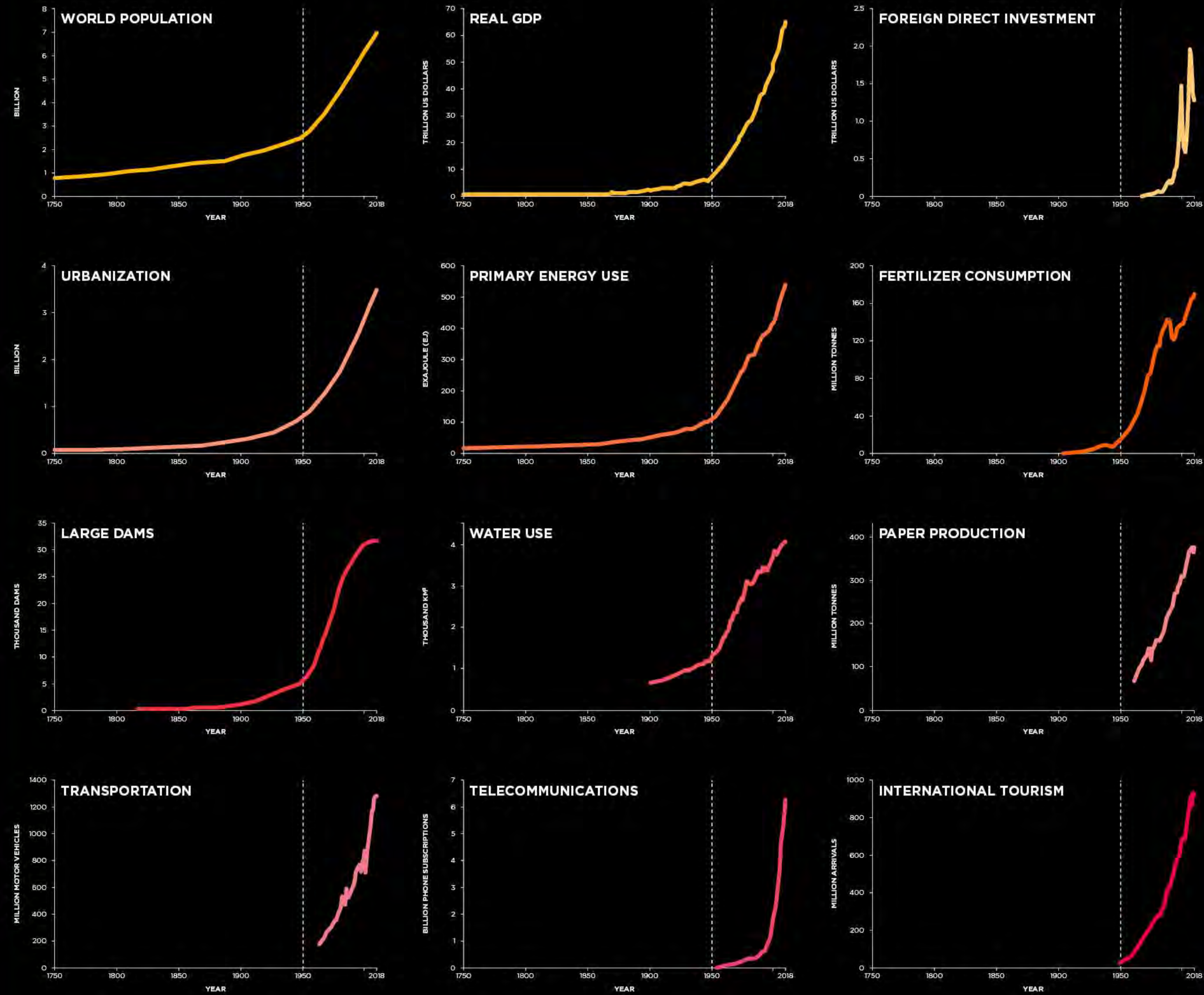
EFFEKT

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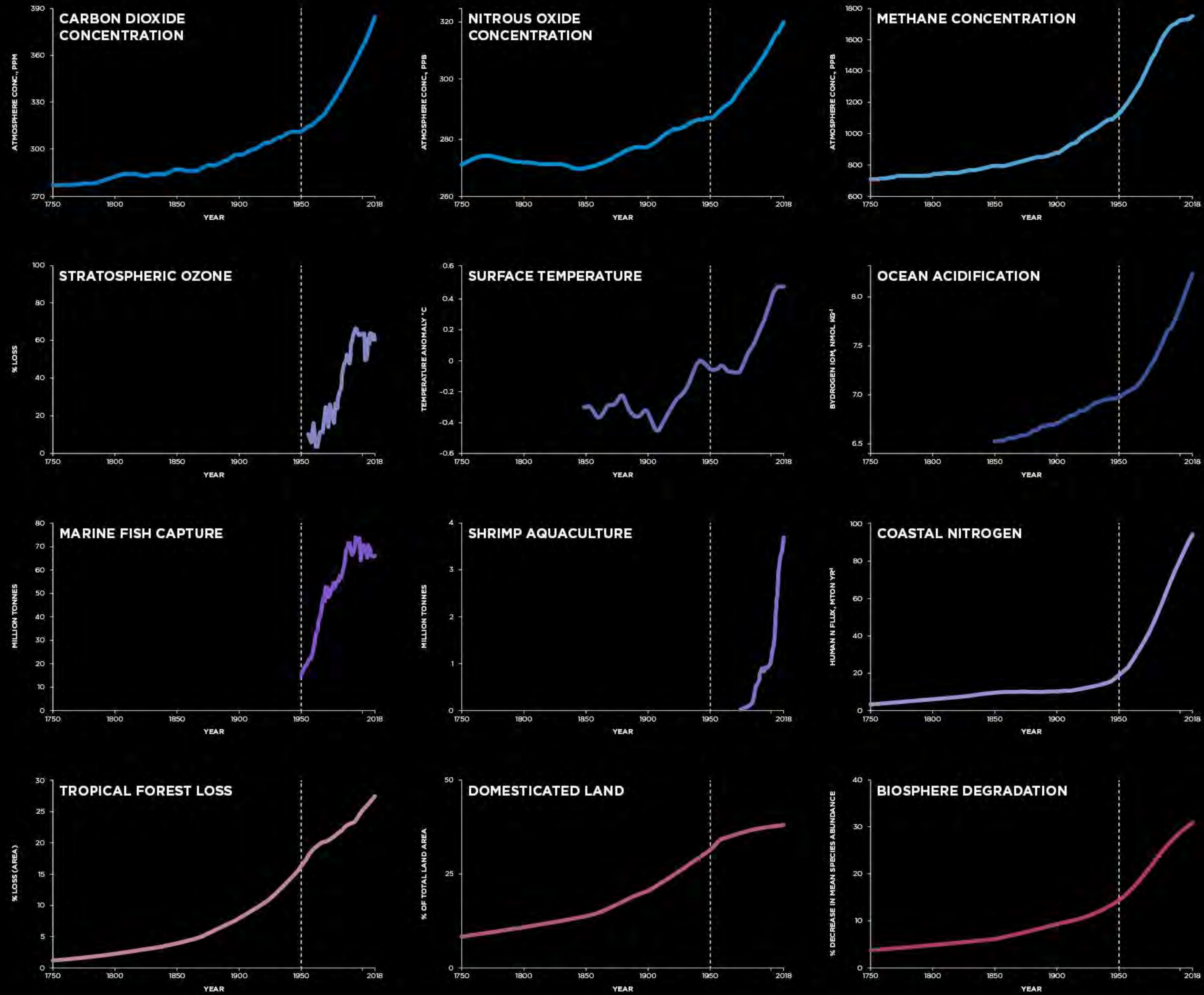
IMPACT



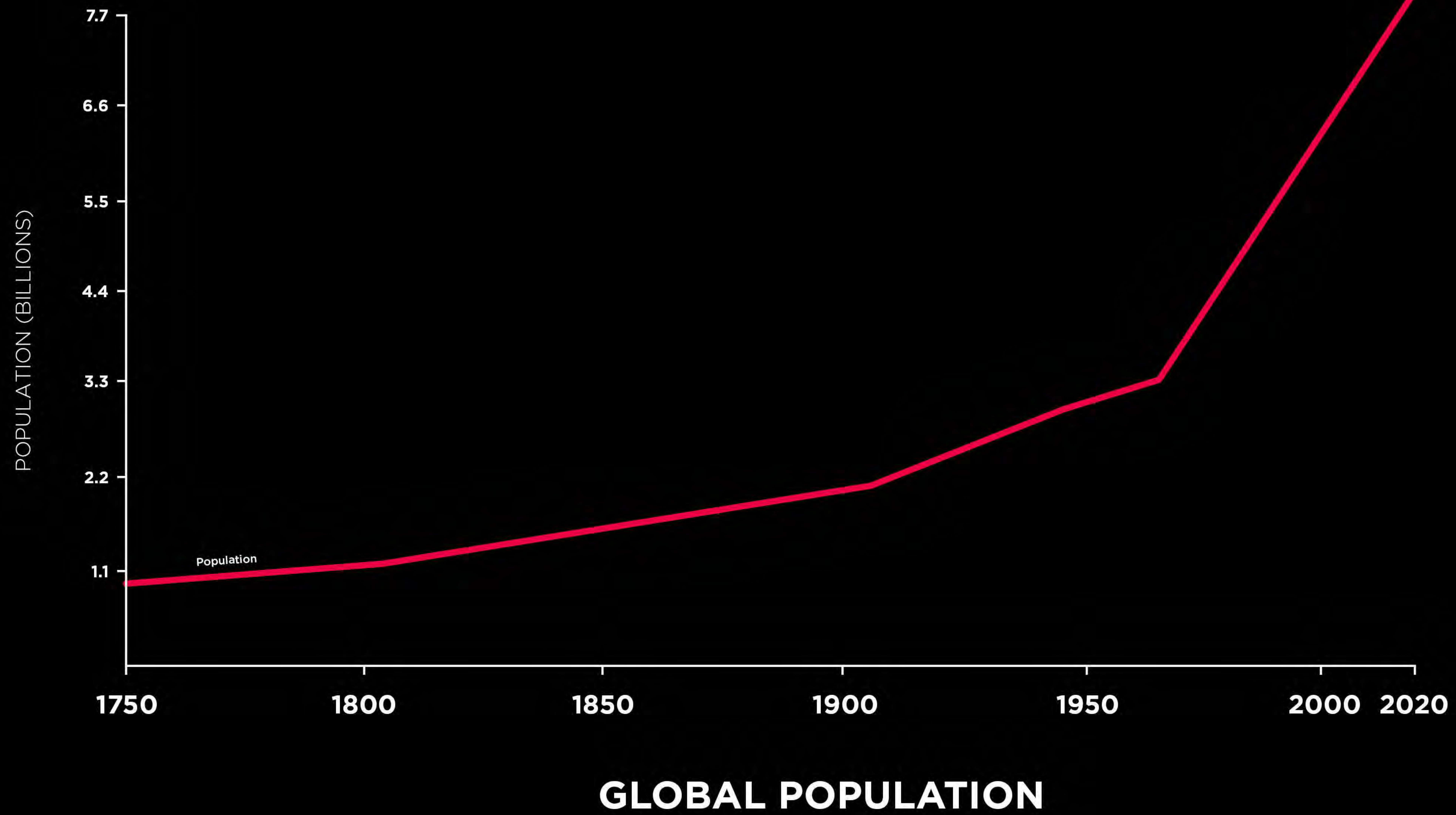
SOCIO-ECONOMIC TRENDS

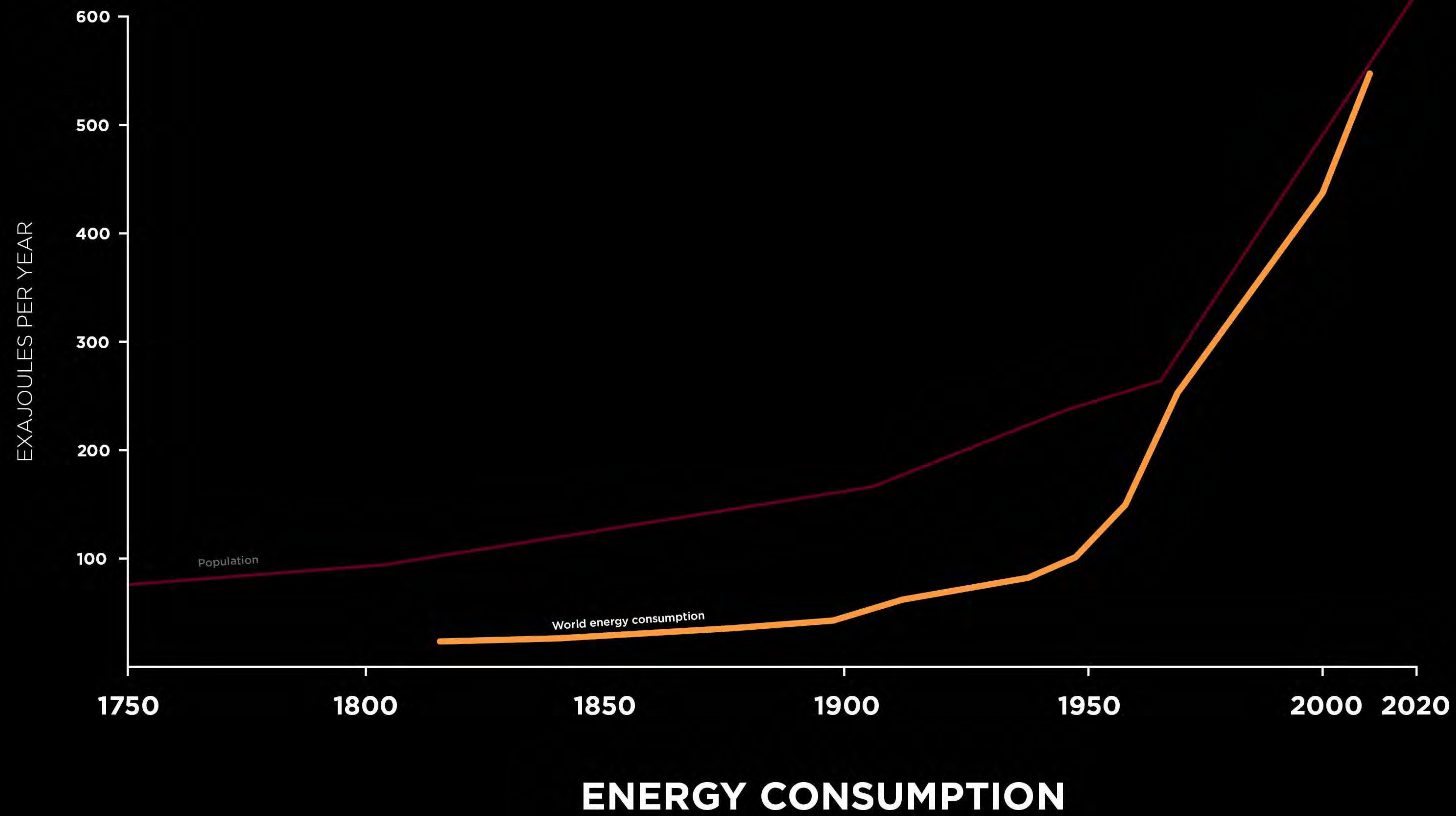


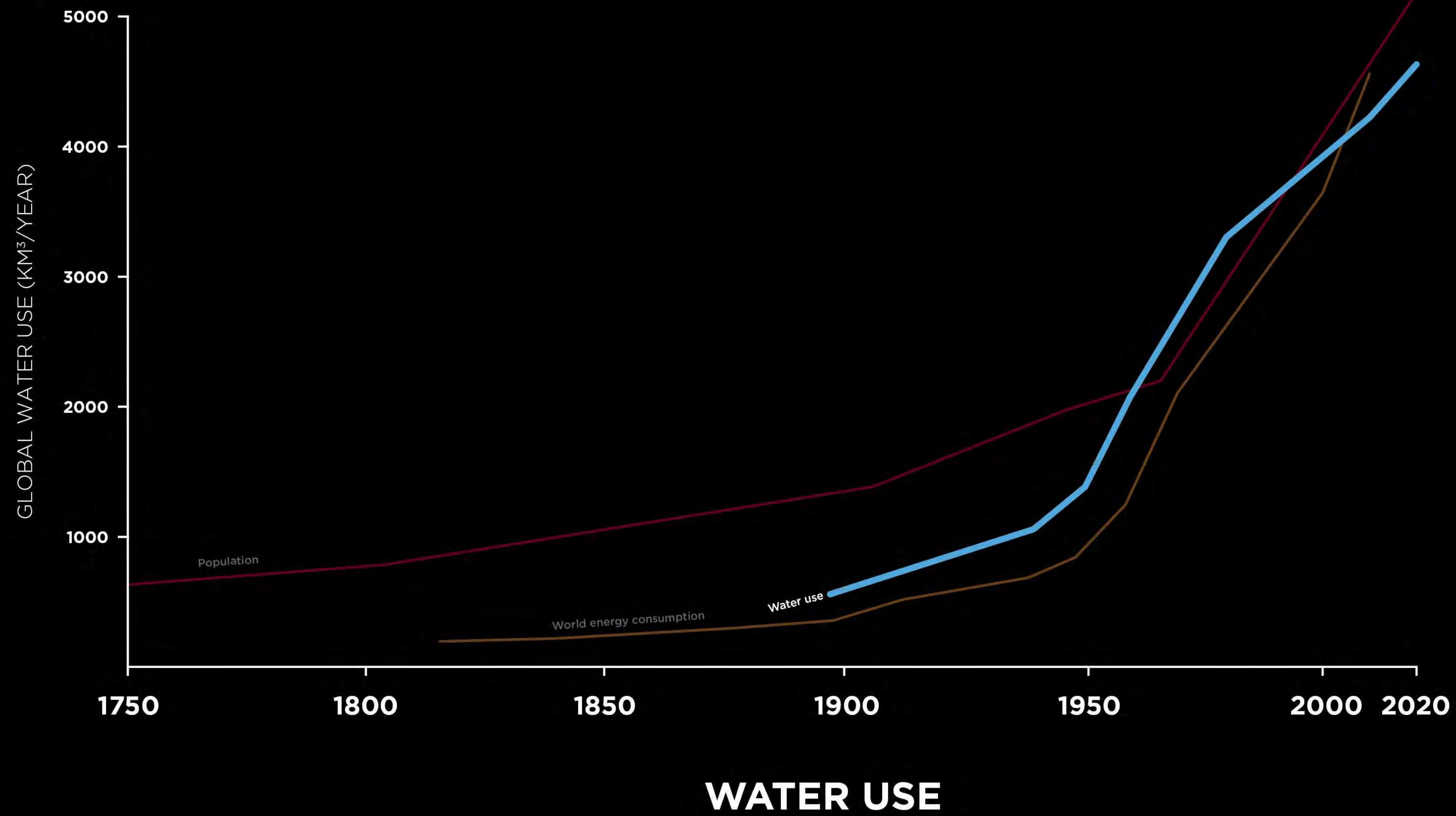
ECOLOGICAL IMPACT

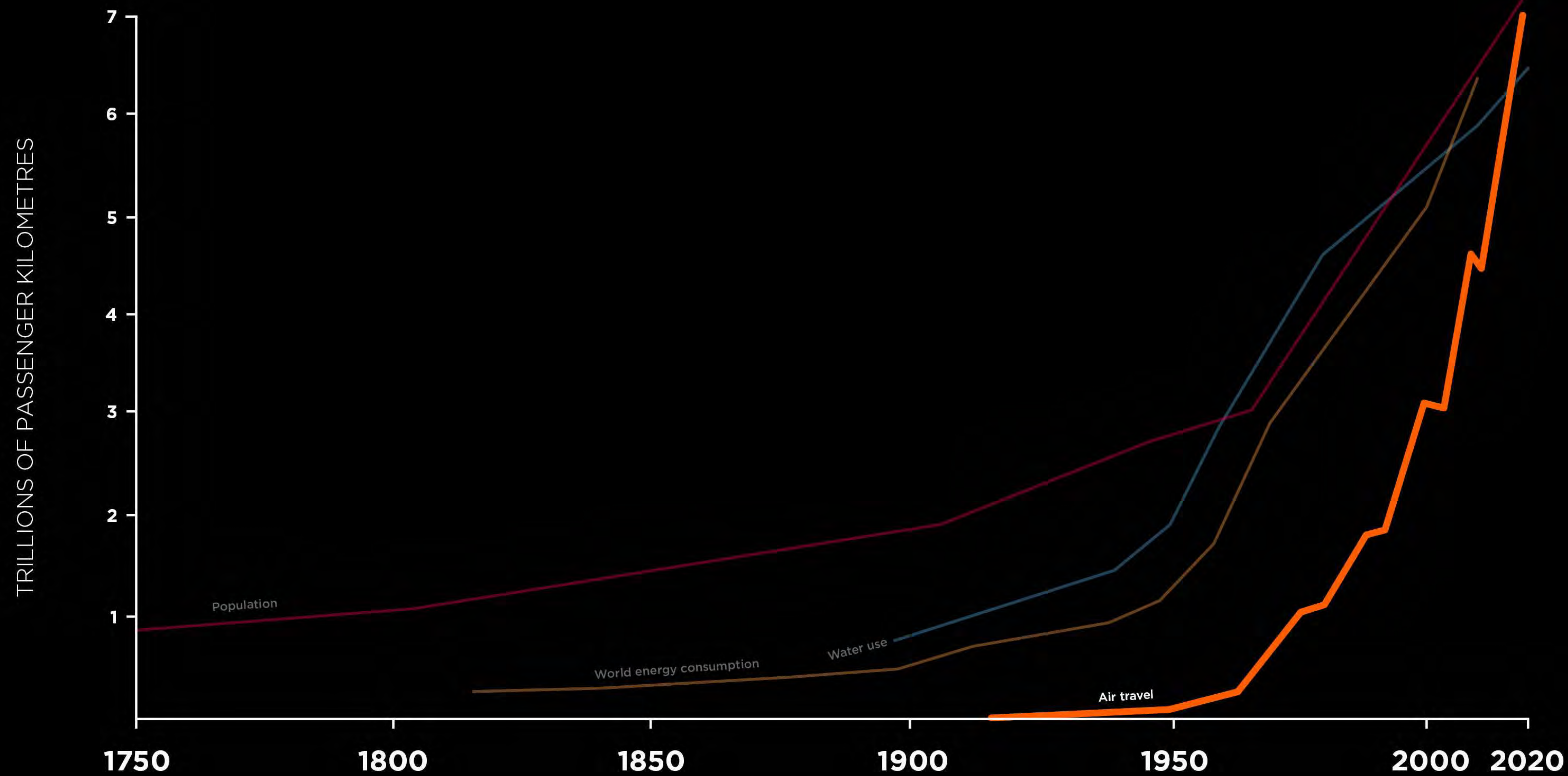


THE GREAT ACCELERATION

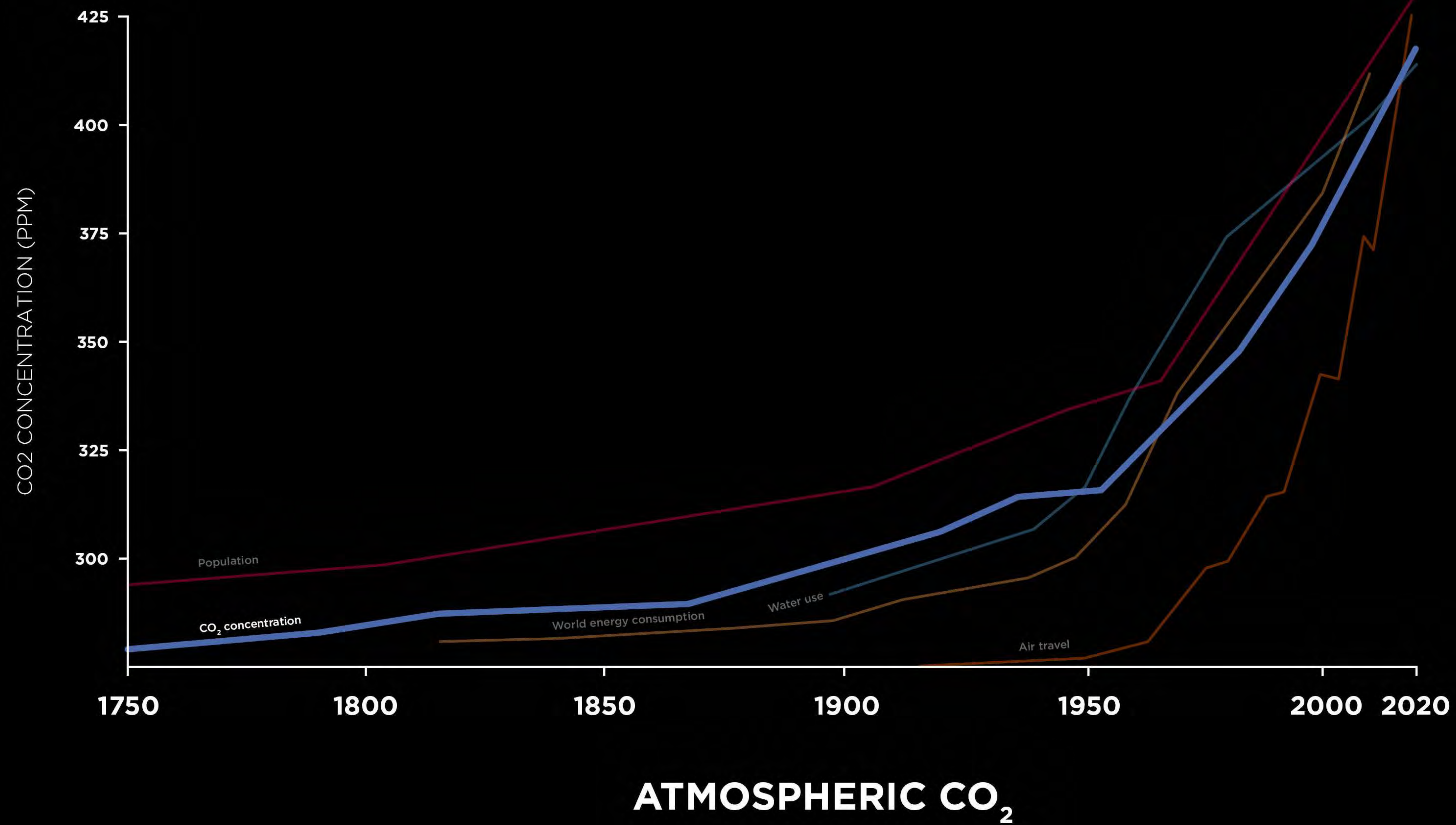


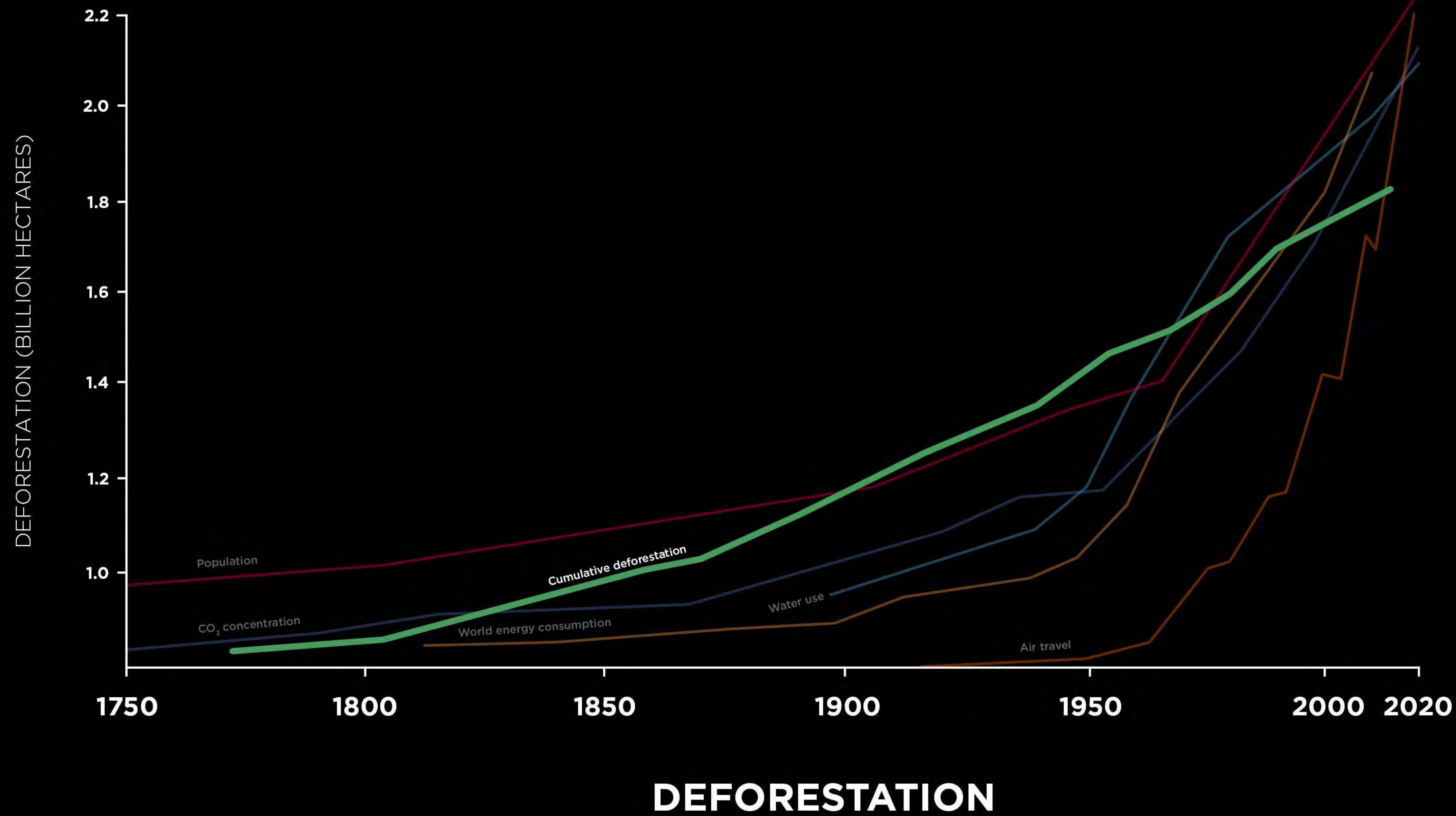


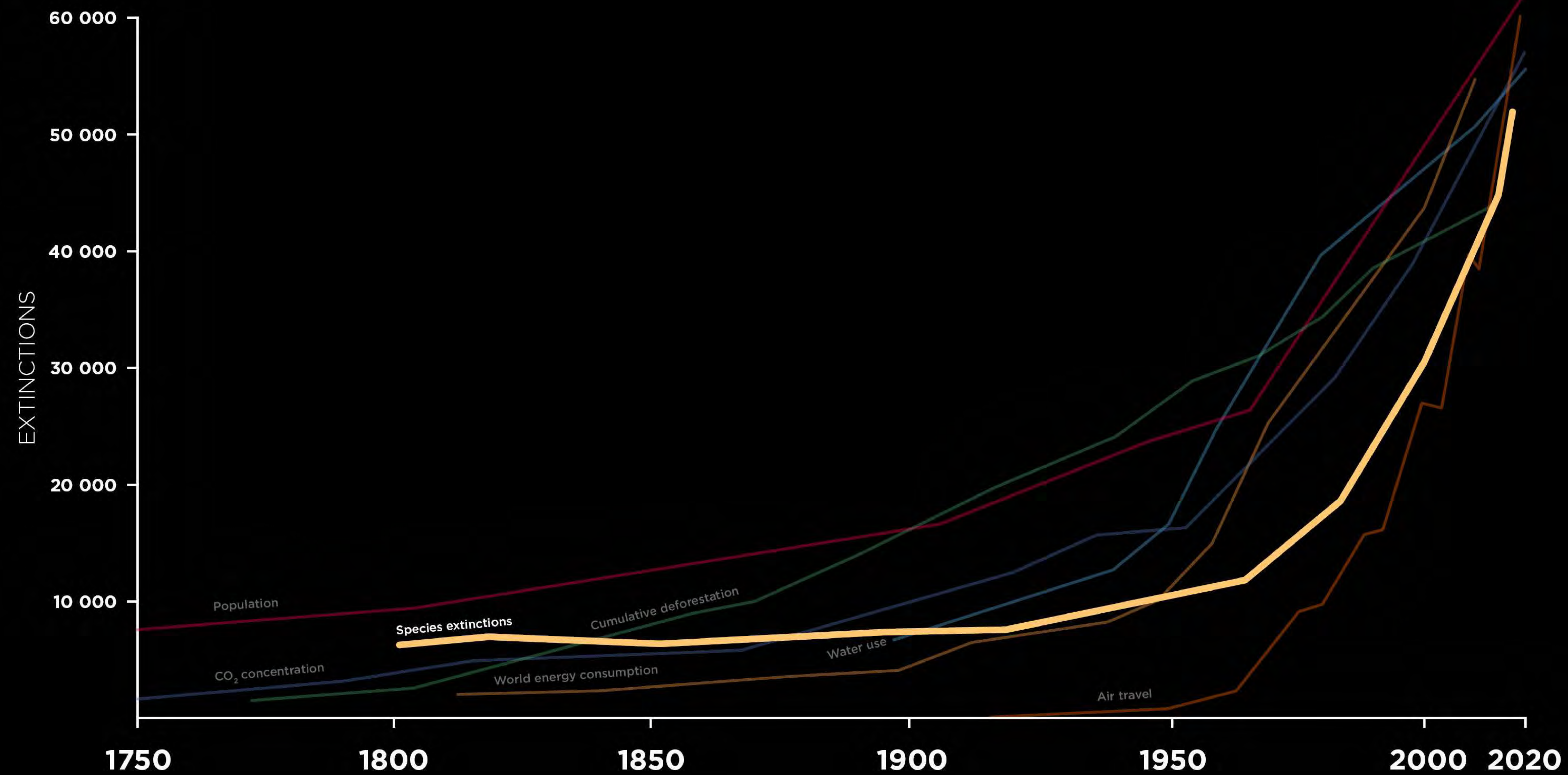




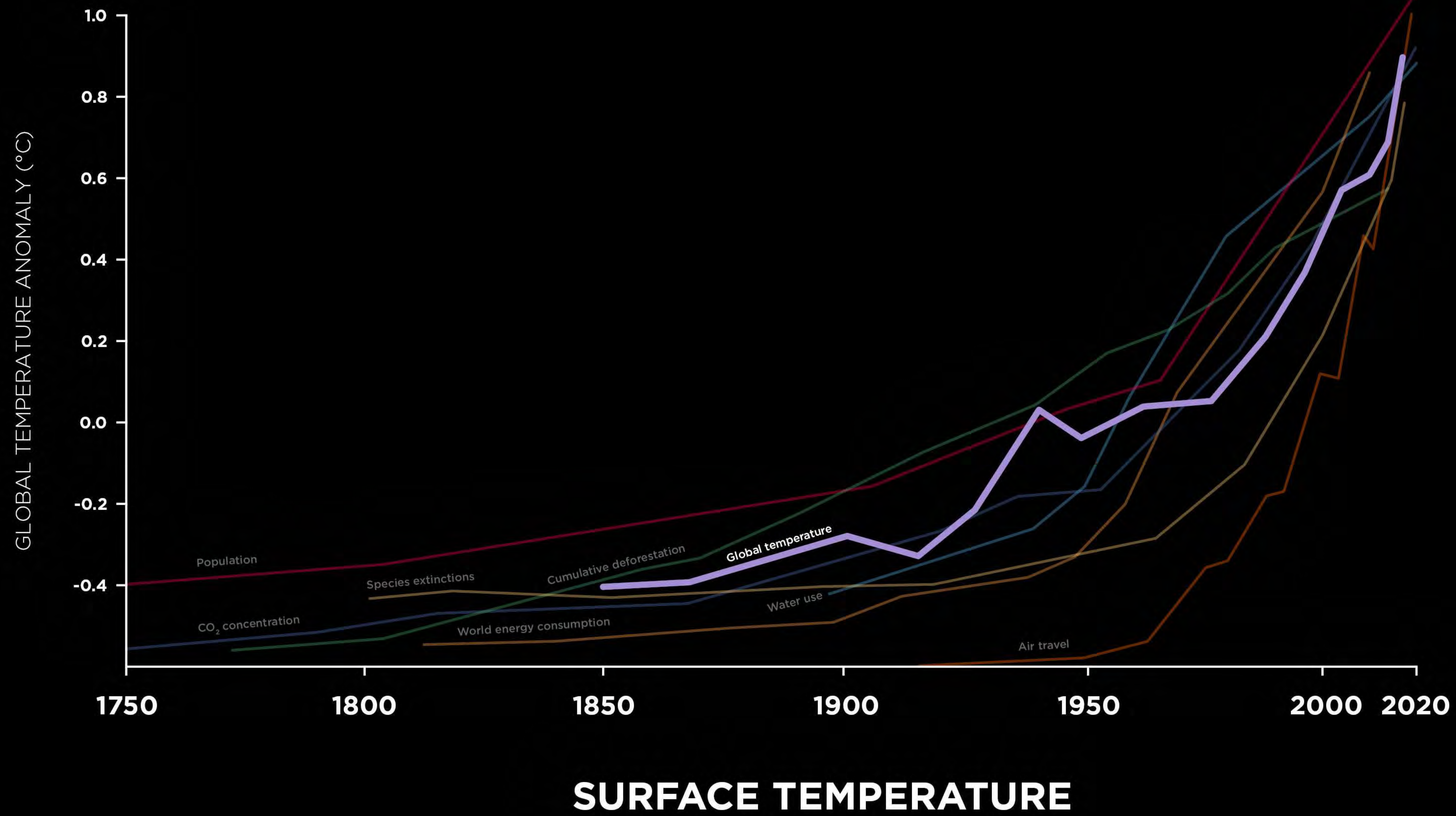
AIR TRAVEL

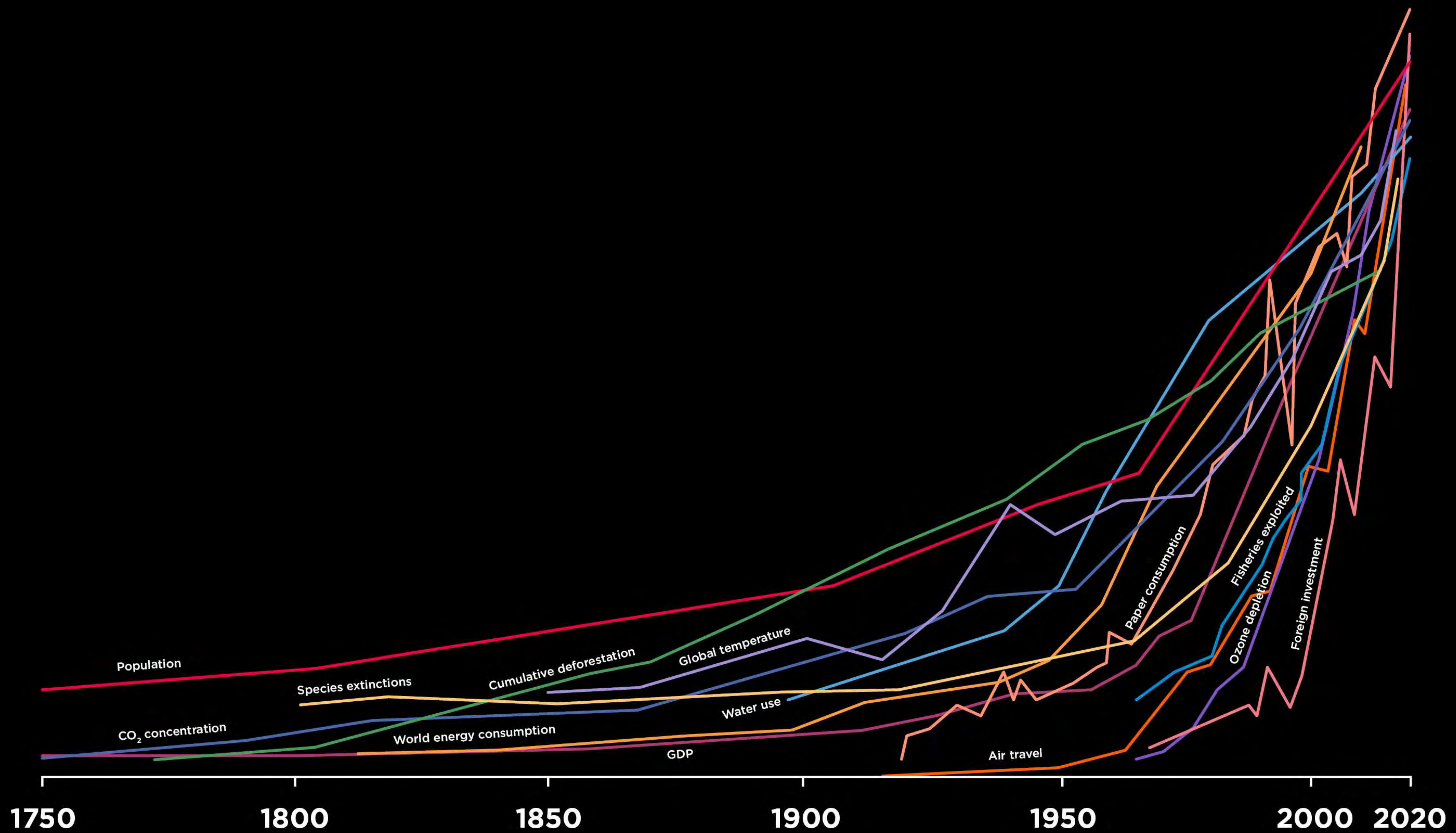






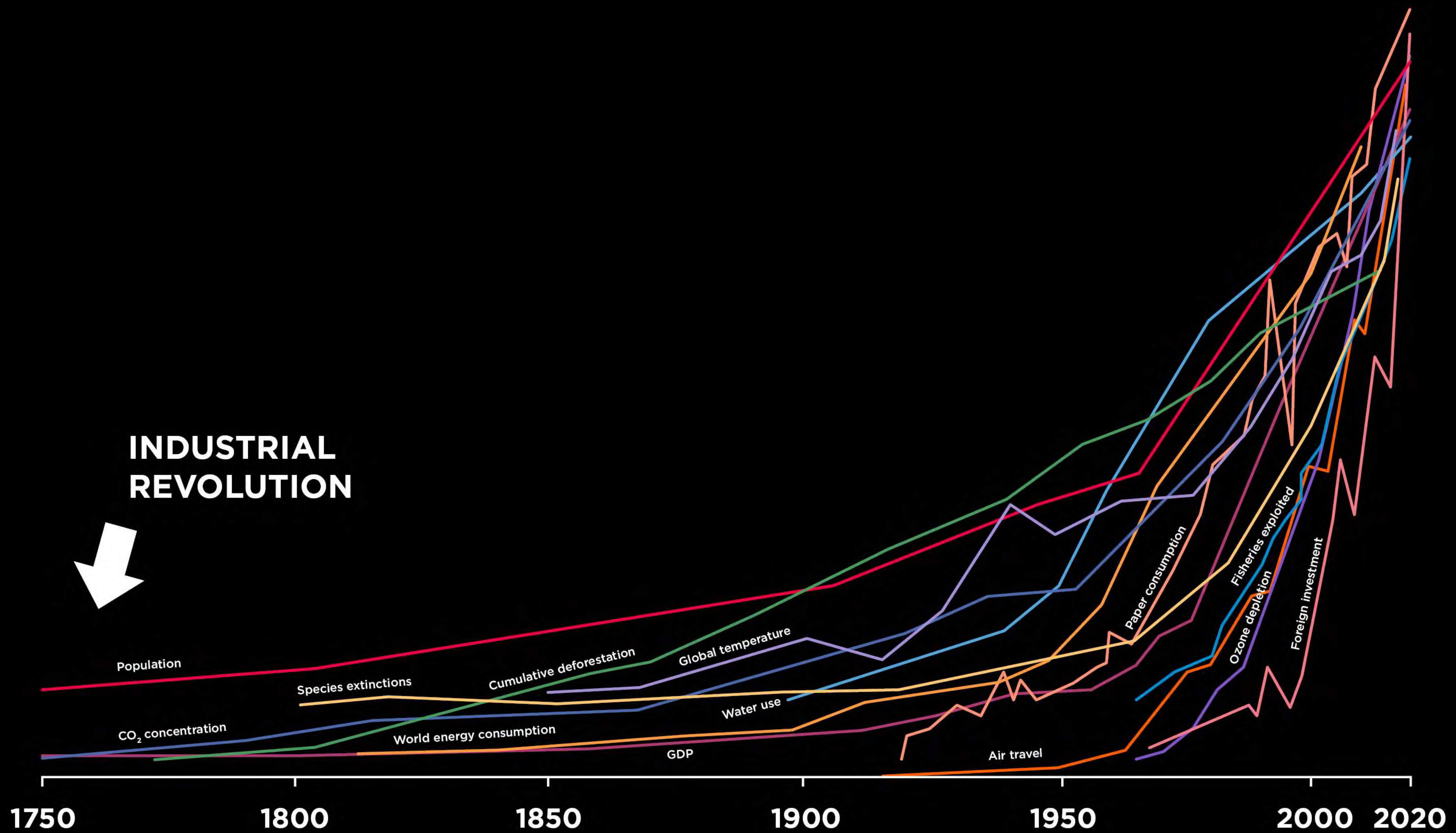
SPECIES EXTINCTIONS





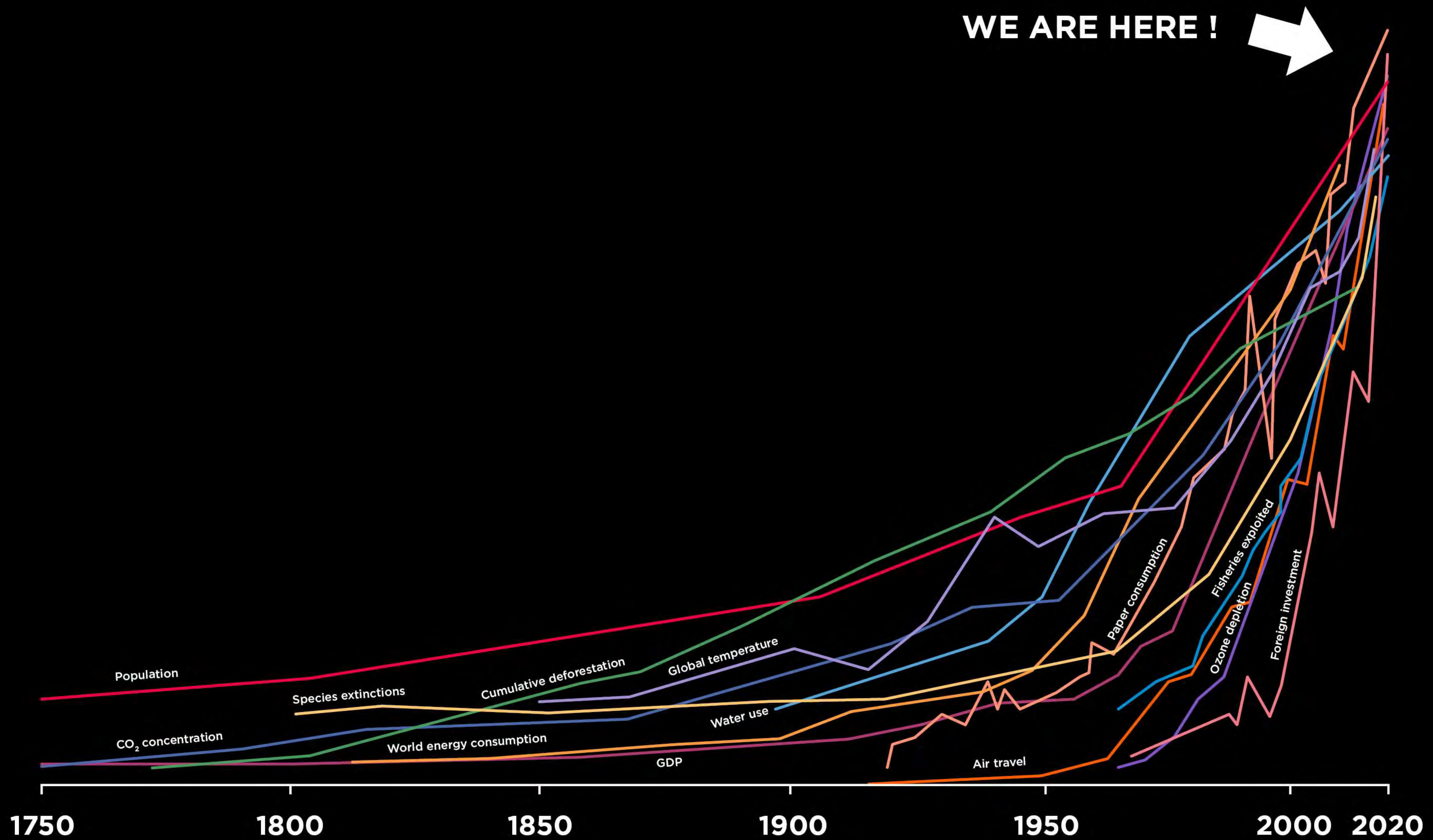
THE GREAT ACCELERATION

Portrait of our age



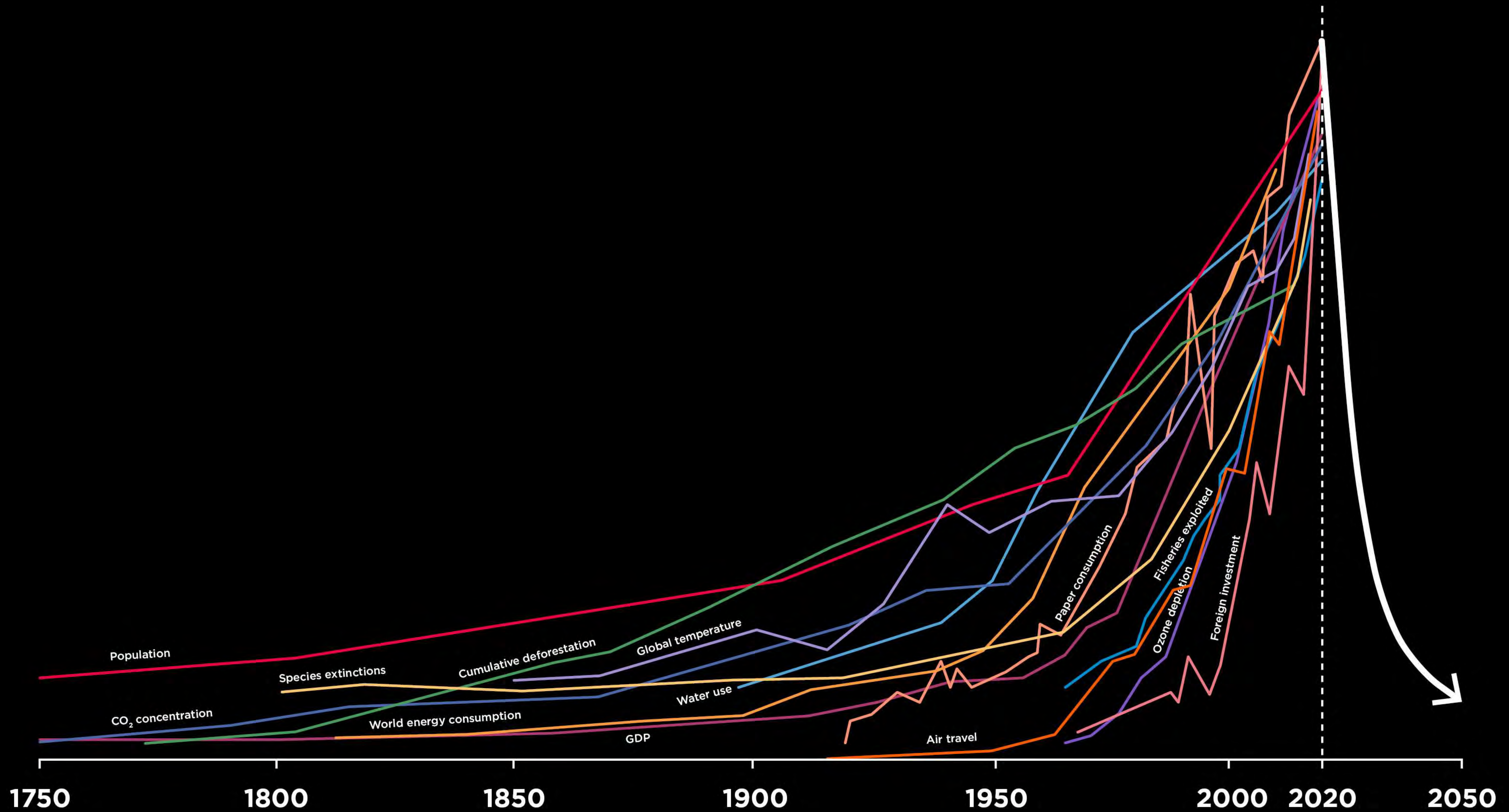
THE GREAT ACCELERATION

Portrait of our age

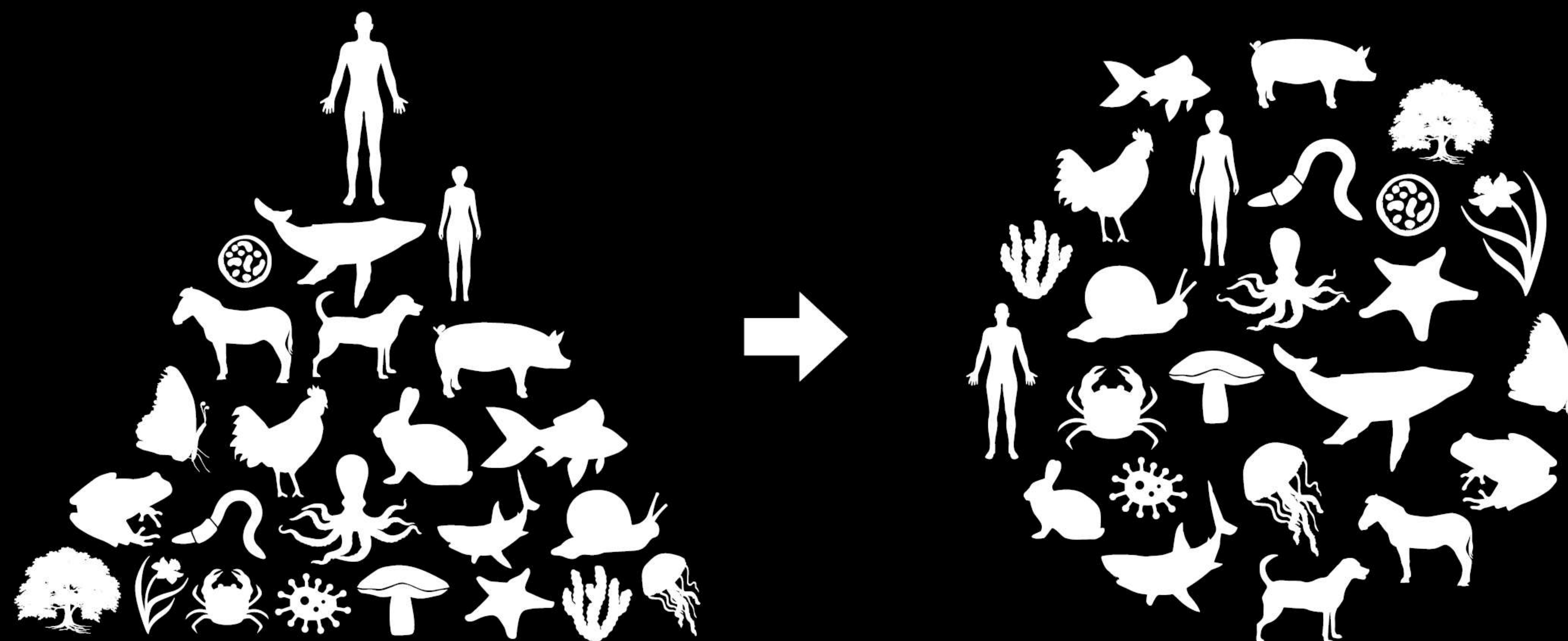


THE GREAT ACCELERATION

Portrait of our age



THE GREAT DESIGN CHALLENGE



FROM EGO TO ECO





Game





VE
ALT

DANCE

SKATE

Game



















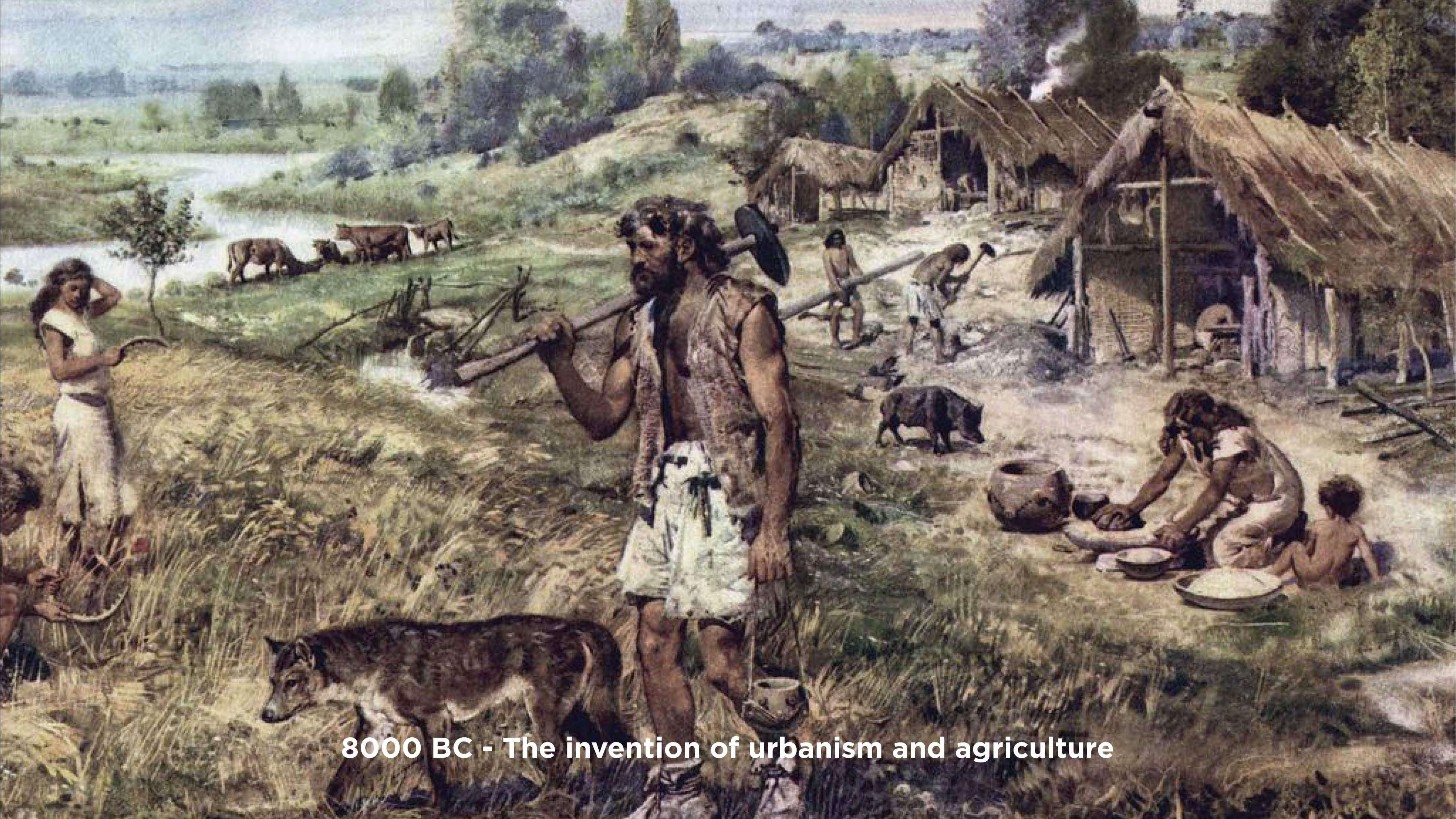






**Through our work we aim to adress
some of the global challenges
we as humanity are facing**

**and to shape new aspirations through design
to create better and more sustainable ways of living
for the many.**



8000 BC - The invention of urbanism and agriculture



Denmark 1100 AD



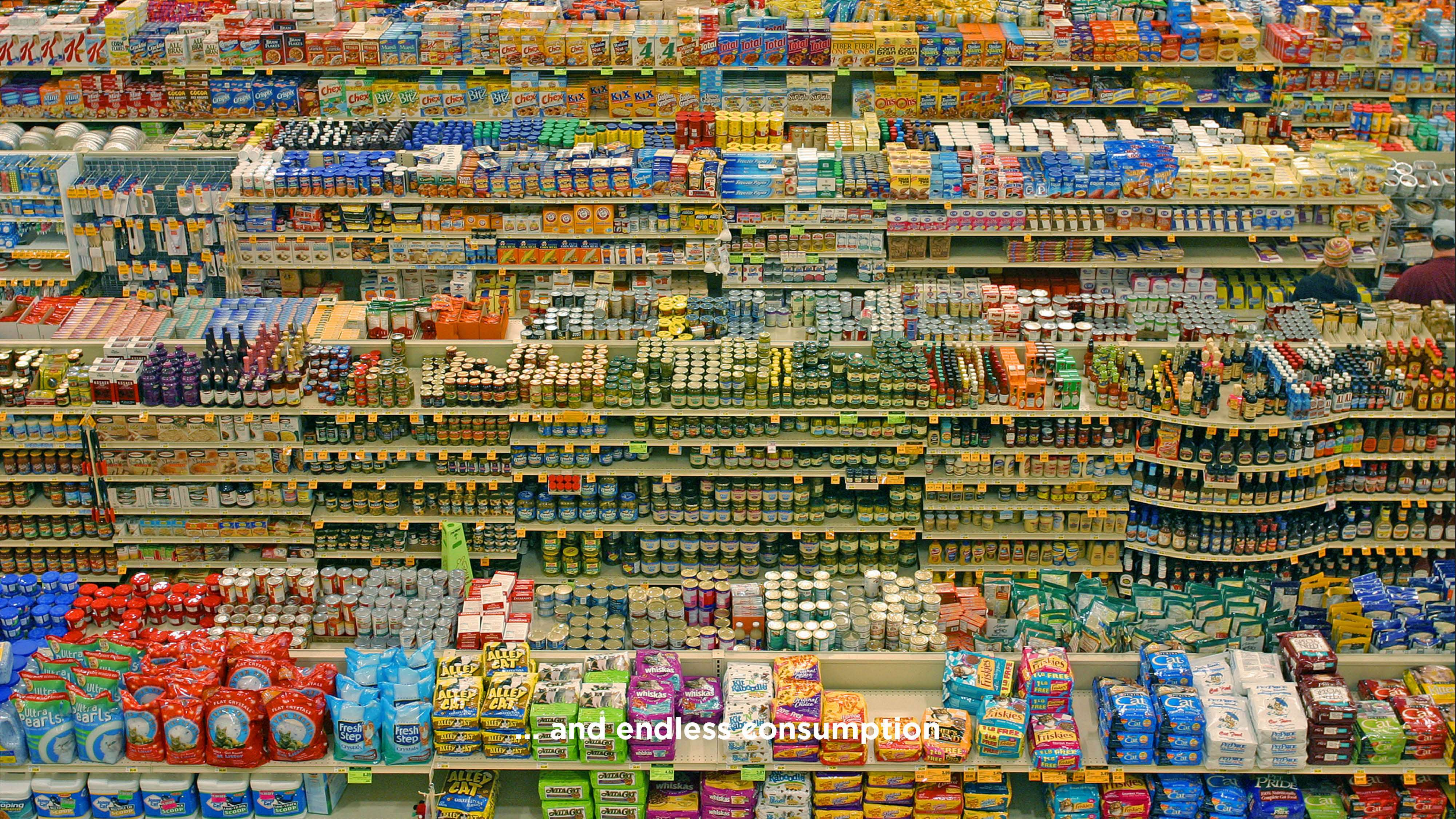
Industrialization enabled endless land use..



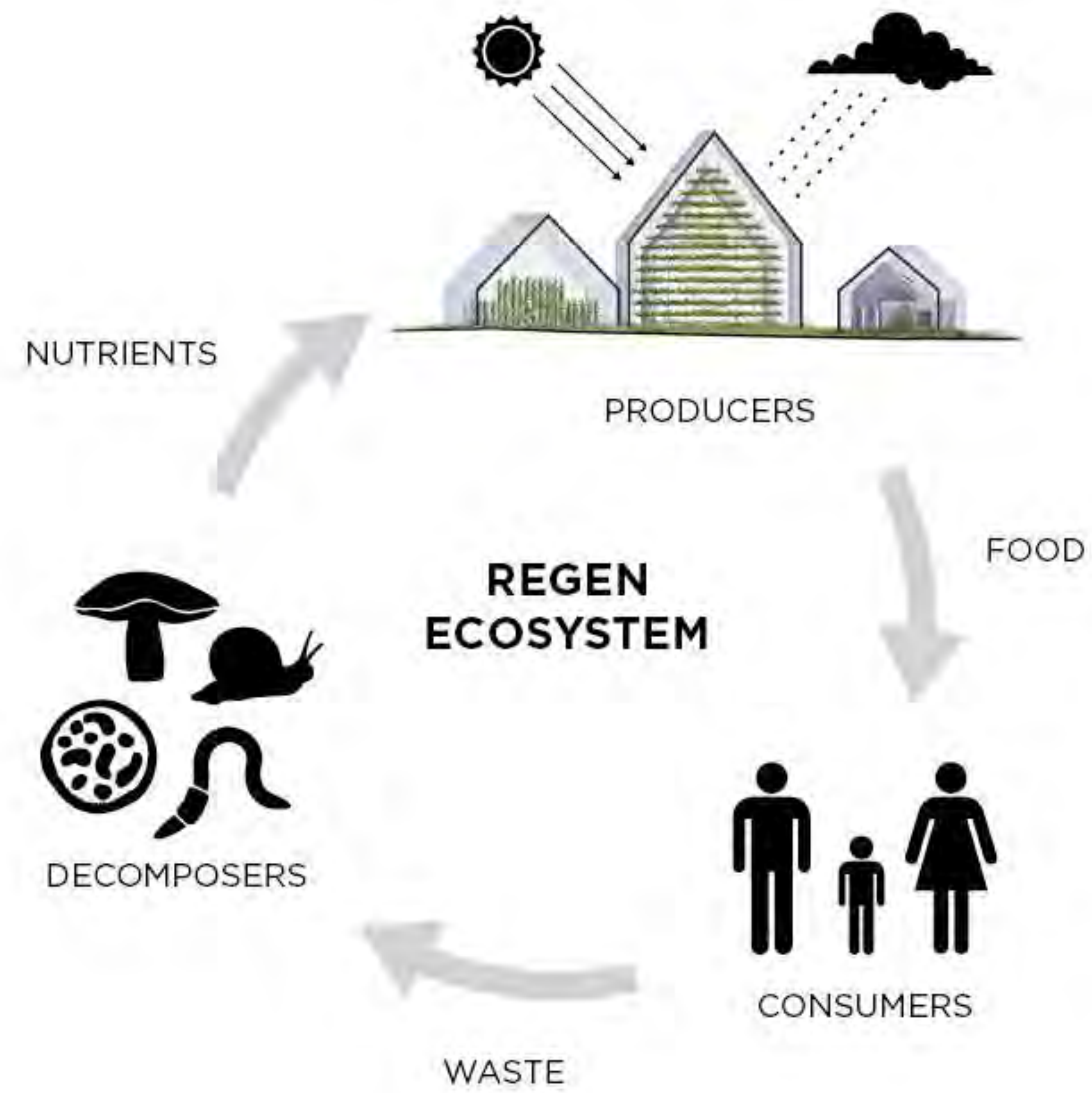
...endless farming

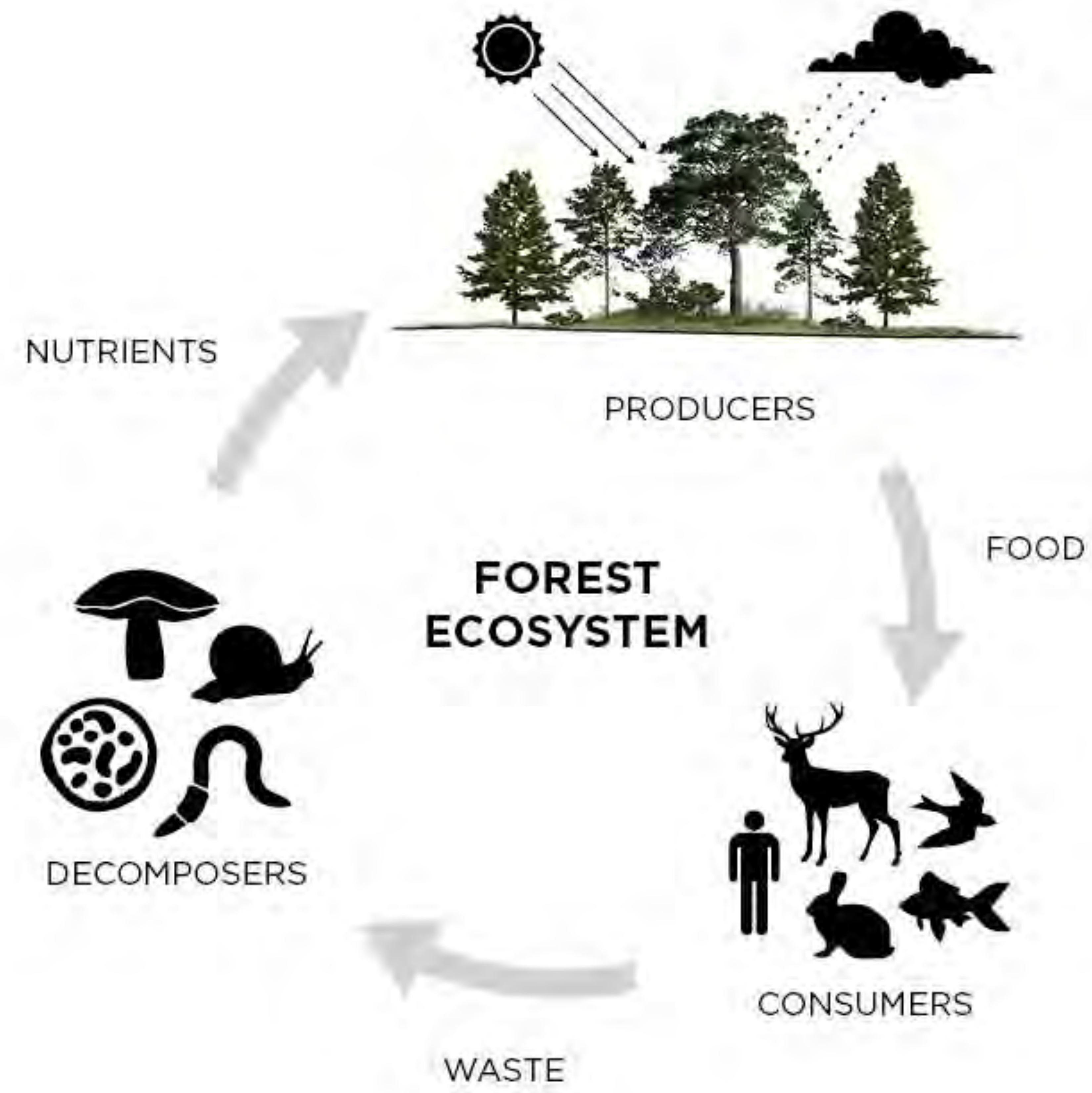


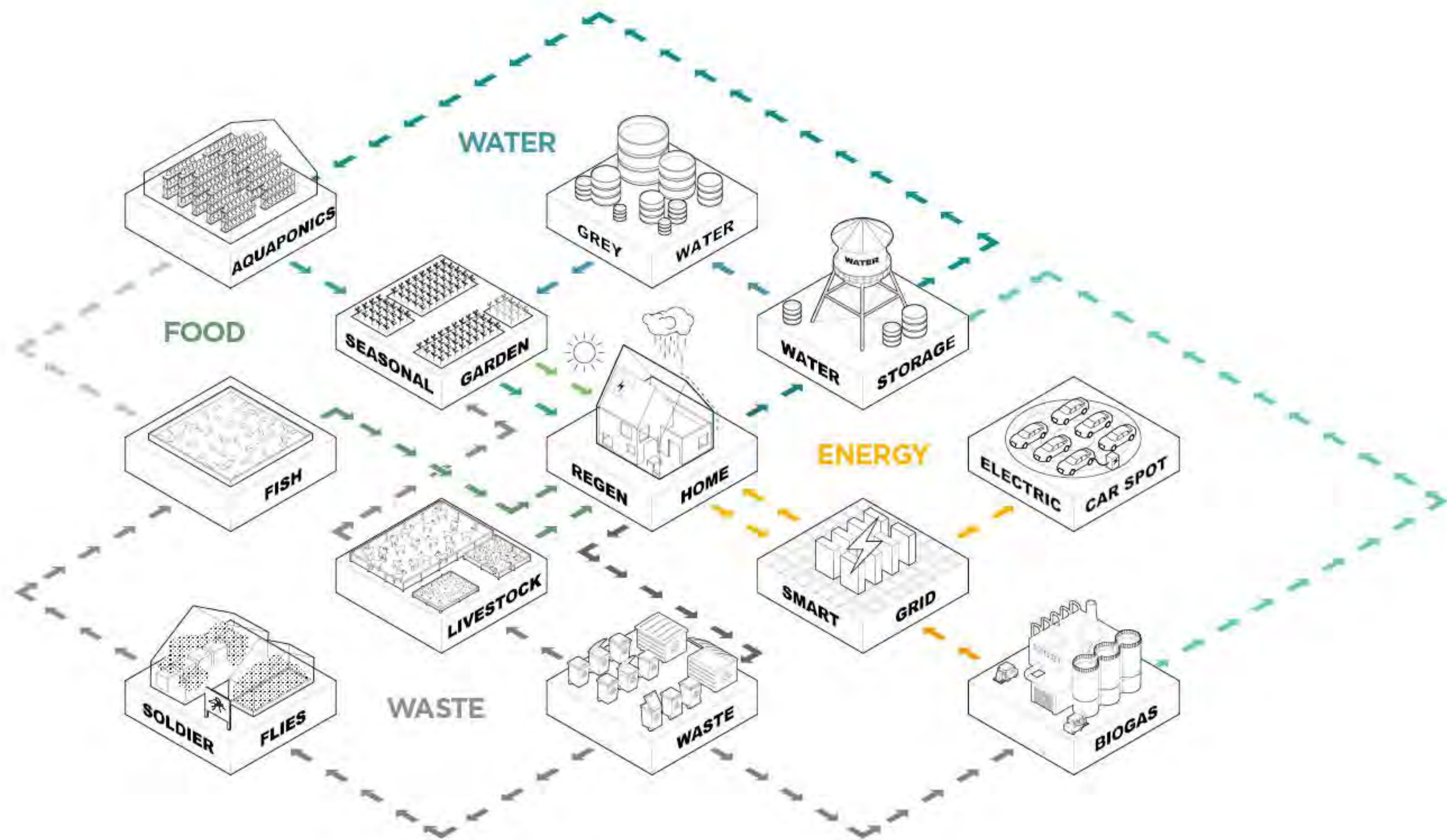
... endless cities



and endless consumption







Waste-to-Resource System







PRODUCING AN ABUNDANCE OF





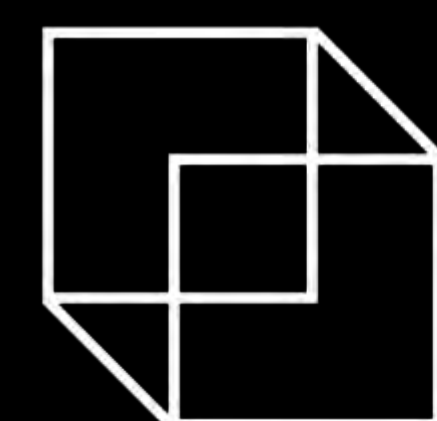
From regenerative rural communities
to urban villages

How do we provide sustainable, affordable and livable homes for the many?

URBAN VILLAGES

Collaborators: SPACE10 FOR IKEA
2018 -

EFFEKT



SPACE10







As urban population grow and housing stock doubles we need to reach **net zero emission by 2050** to avoid dramatic climate change



The amount of household will double globally by 2050, with **3 billion people in need of a home**, but only 7% have access to formal housing financing

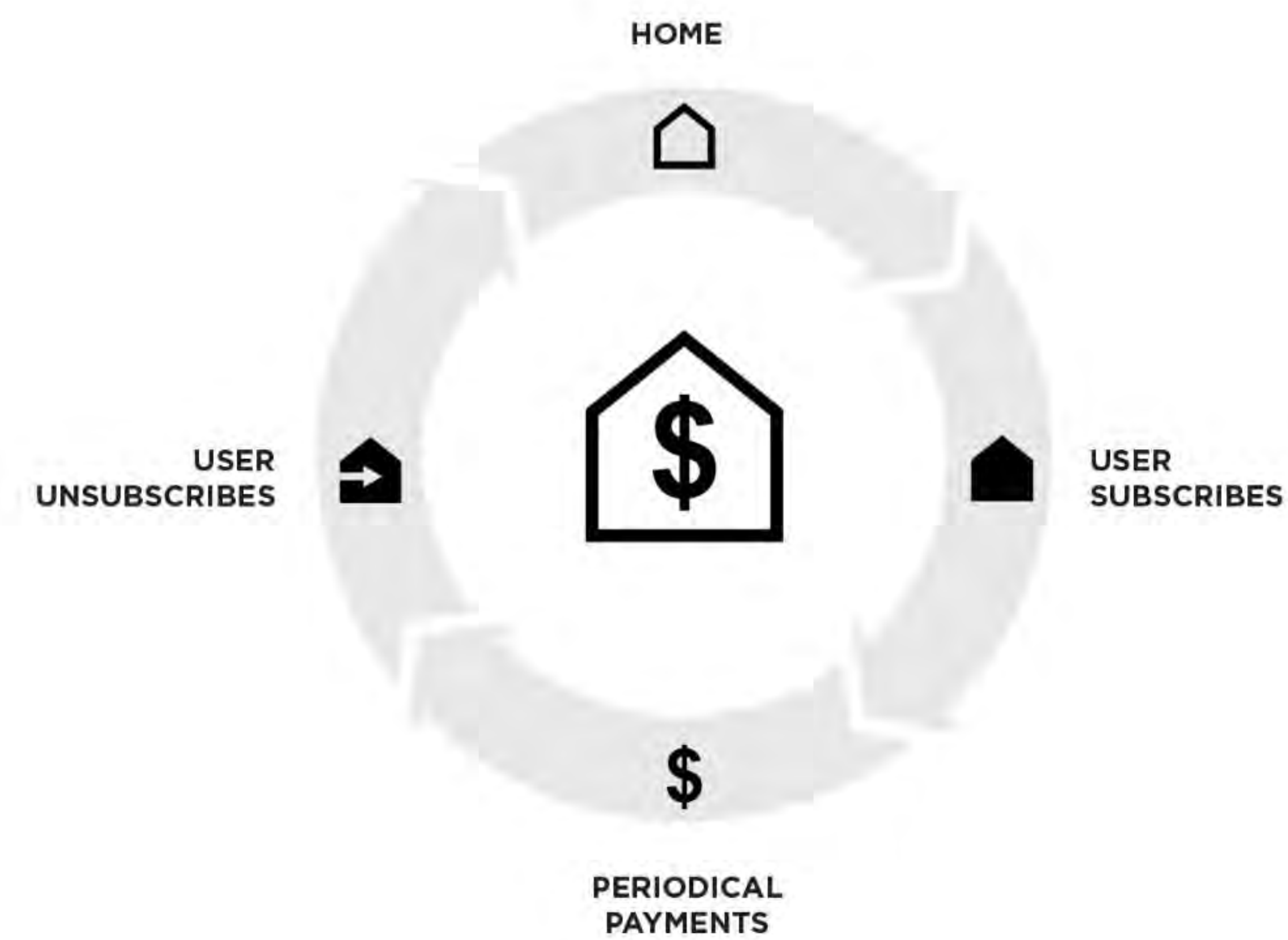


Even though we are more people living closer and more connected than ever, **depression is now the world's most widespread illness**

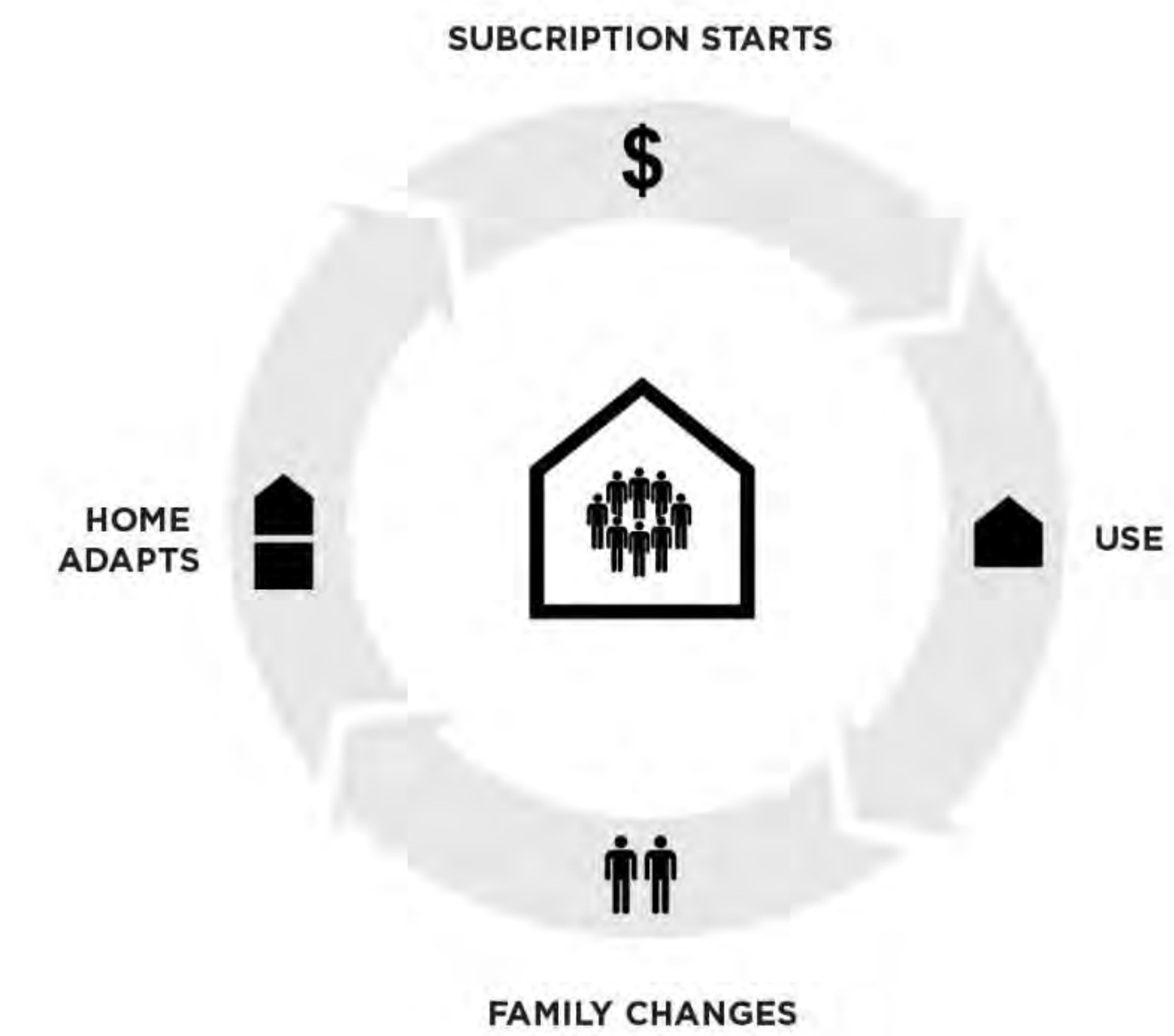
SUSTAINABILITY



AFFORDABILITY

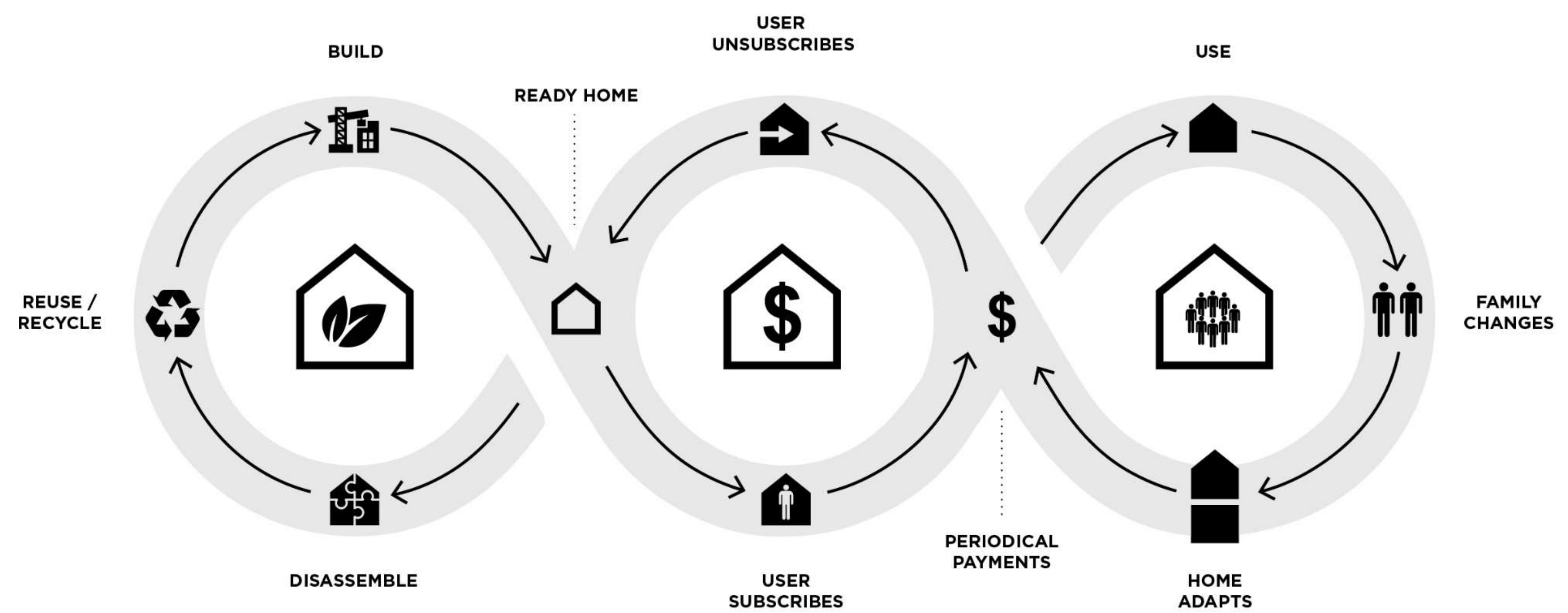


LIVABILITY



Calling for a smarter, more sustainable, affordable and livable solution to our built environment.

SUSTAINABILITY + AFFORDABILITY + LIVABILITY



Urban Village Project

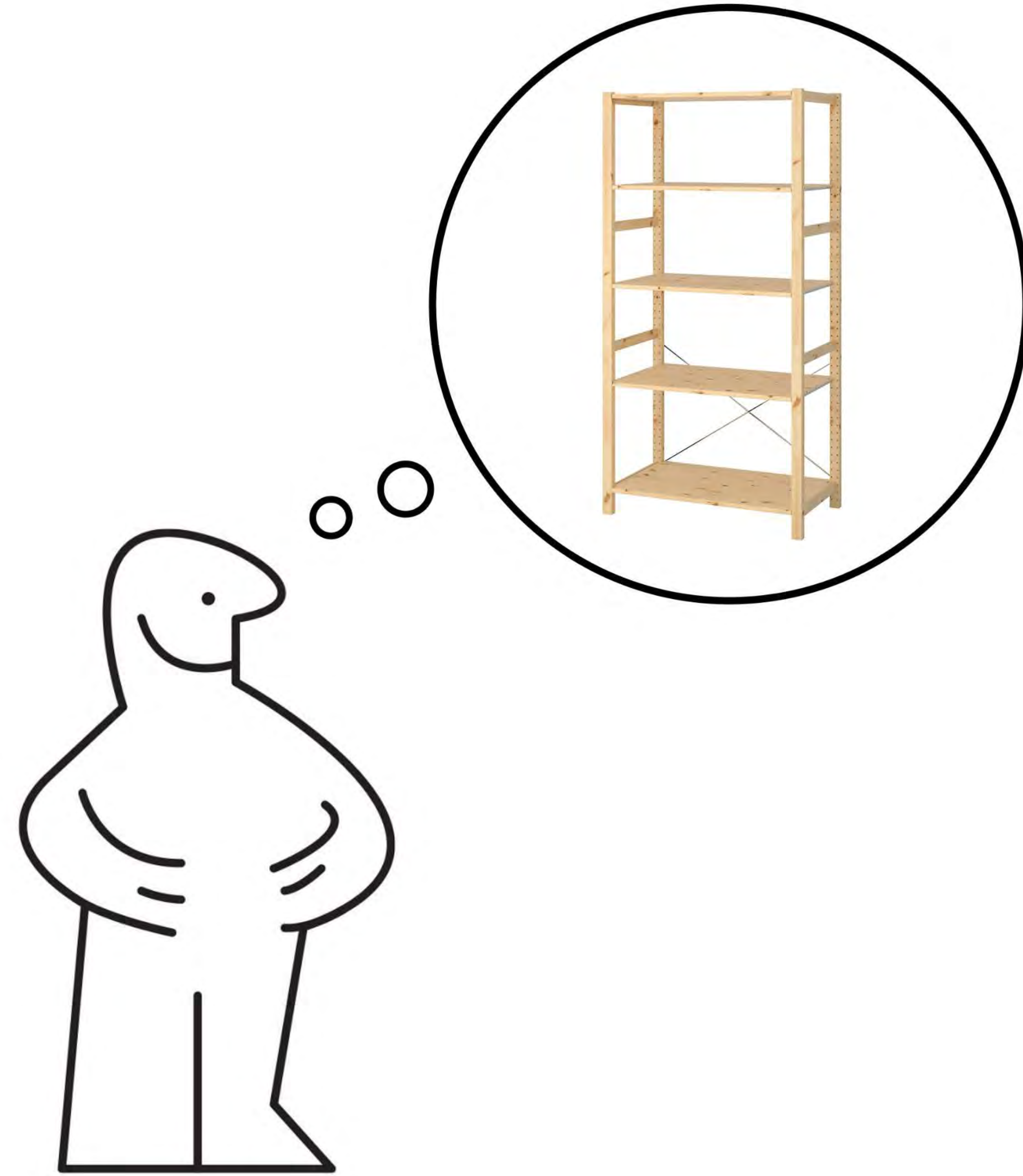
IS THERE A BETTER WAY?

HOW COULD IKEA'S PHILOSOPHY APPLY
AT A LARGER SCALE?



"TOGETHER WE SAVE MONEY"

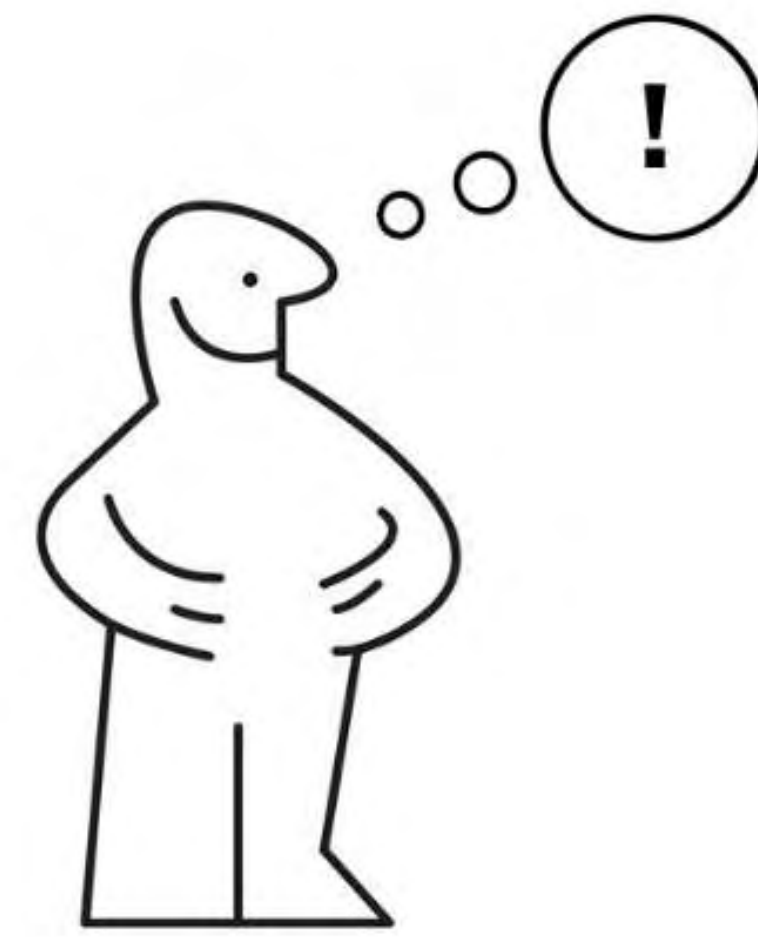
CAN IKEA'S SMART MANUFACTURING AND
CUSTOMER PARTICIPATION TRANSLATE TO THE
BUILDING INDUSTRY?





LEARNING FROM IVAR

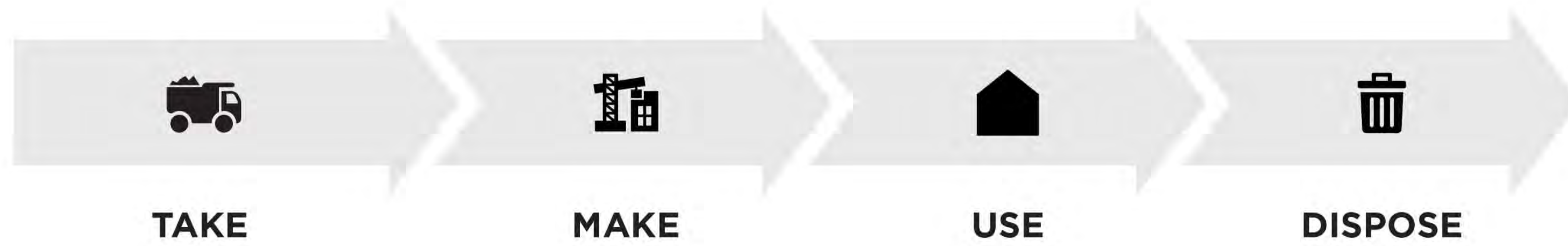




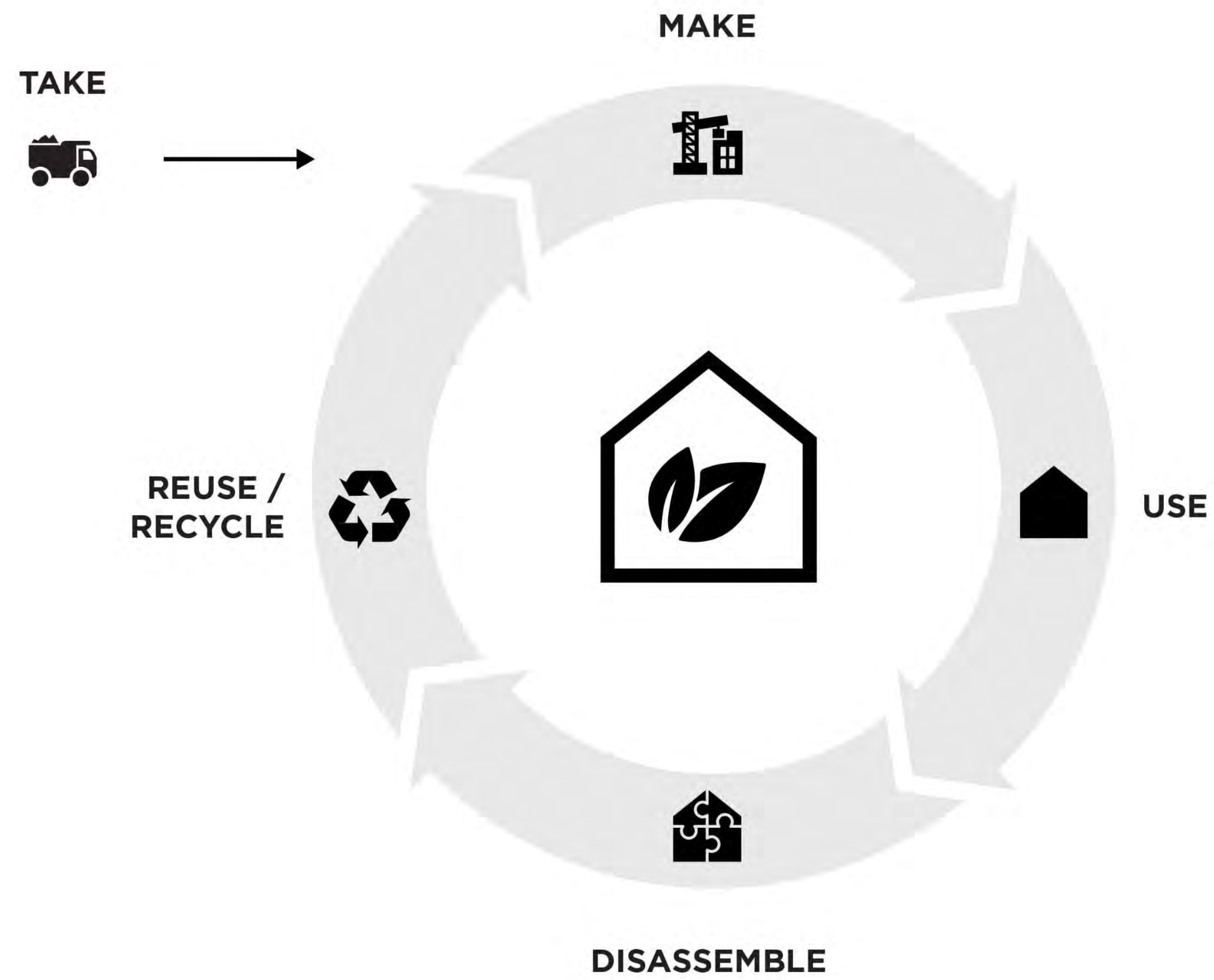
What if we could customize and scale our living spaces the same way we do with furniture?

**WHAT IF WE COULD BUILD
WITHOUT WASTING RESOURCES?**

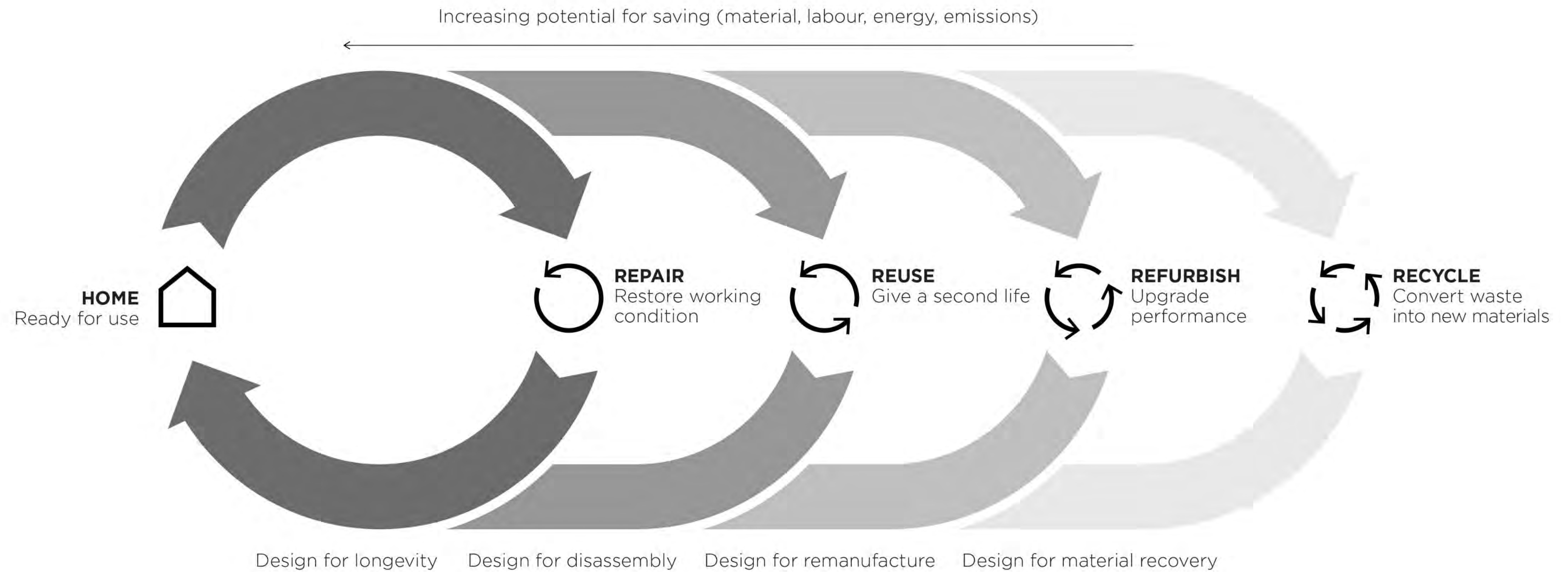
A NEW BUILDING SYSTEM
FROM LINEAR TO CIRCULAR RESOURCE LOOP



From linear resource model ...

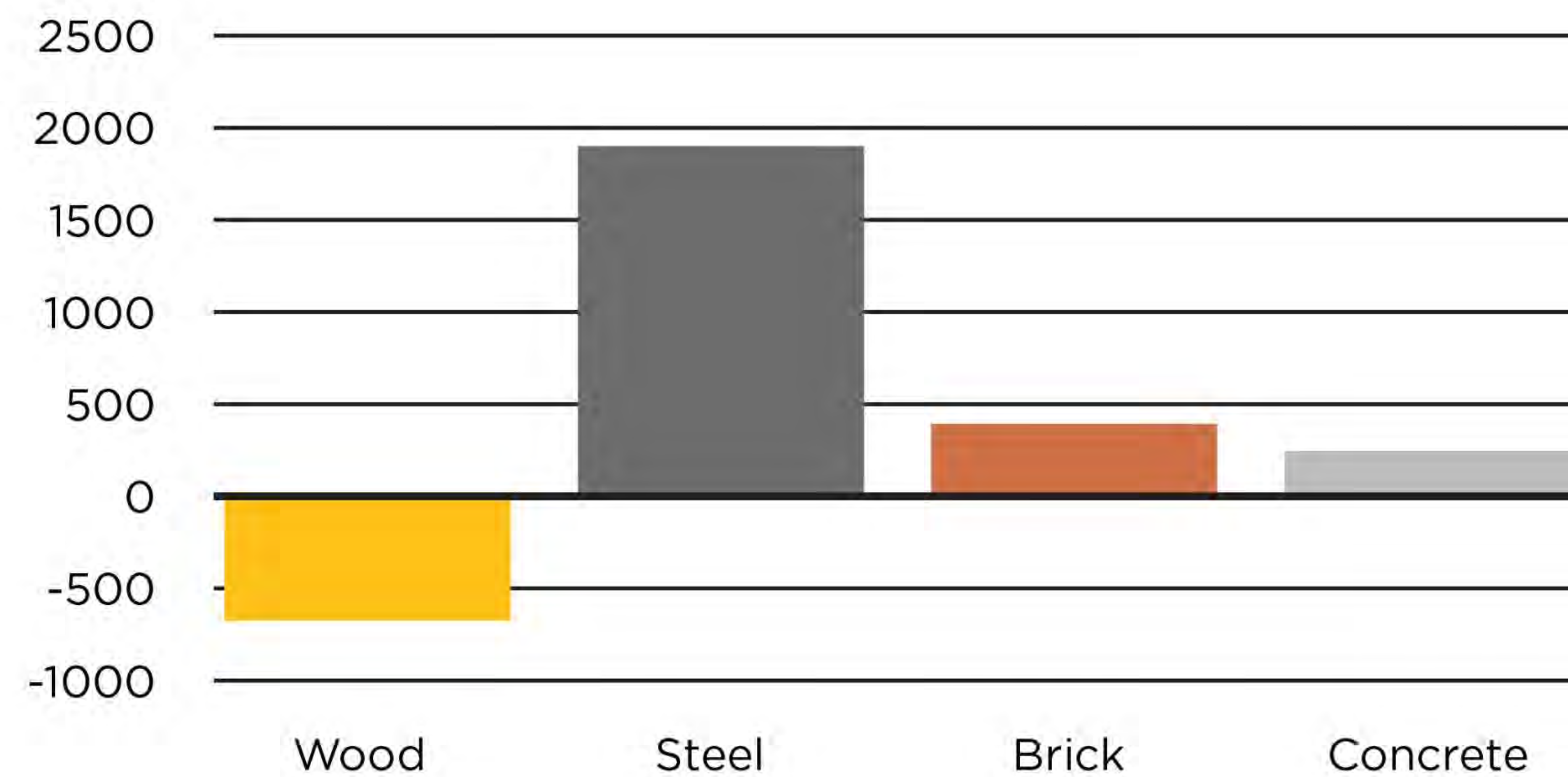


... to circular resource model

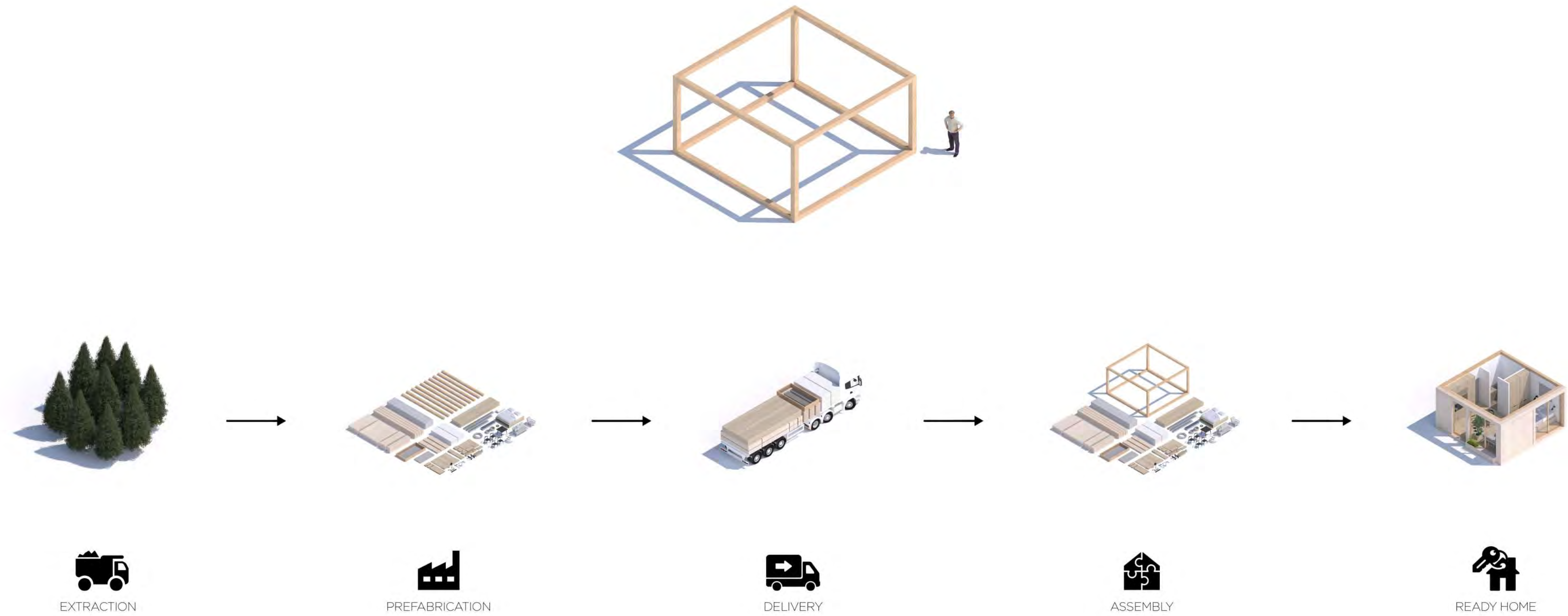


Maintaining resources at their highest potential value

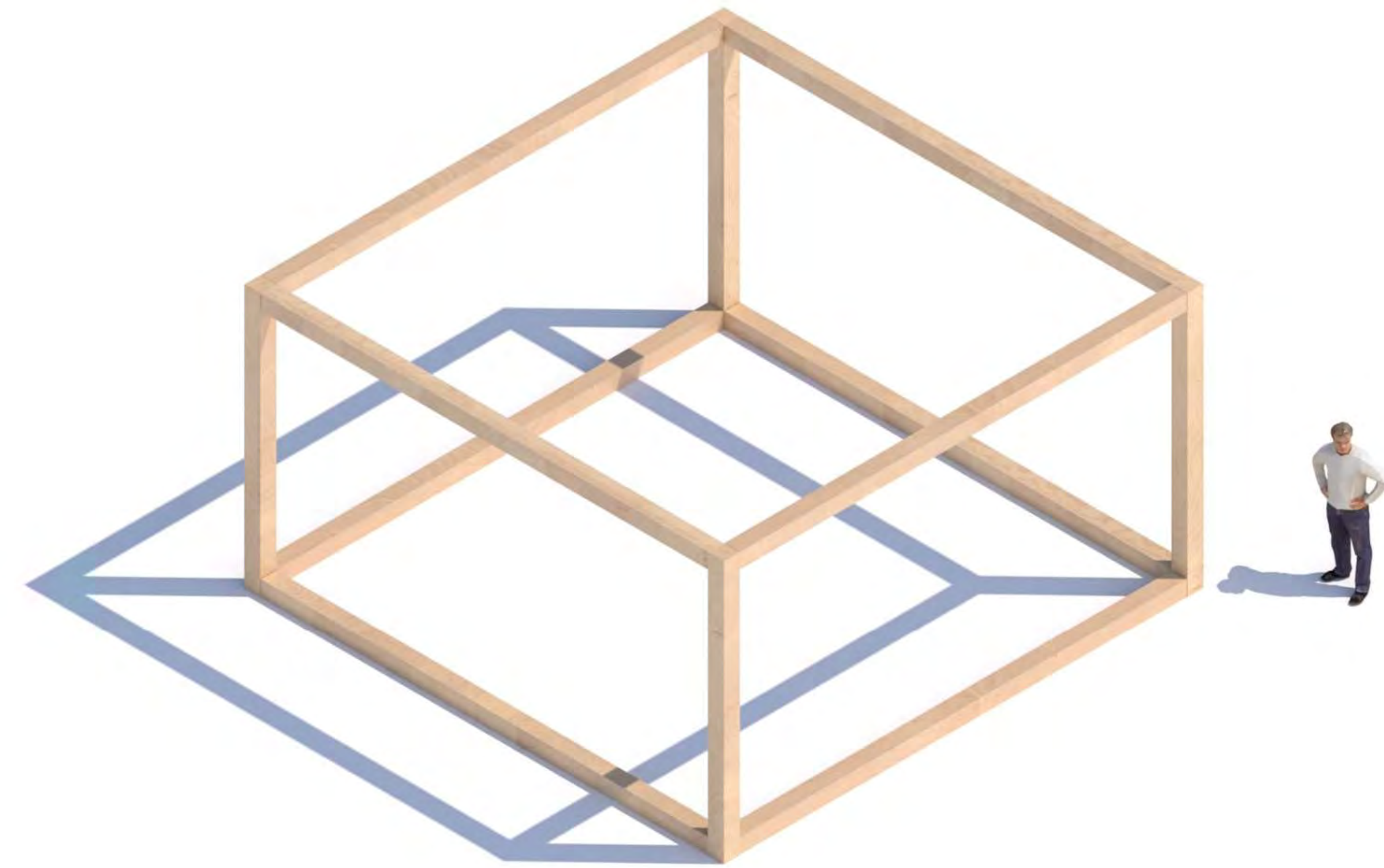
Kg of CO₂ emitted (or stored) to create each tonne of building materials



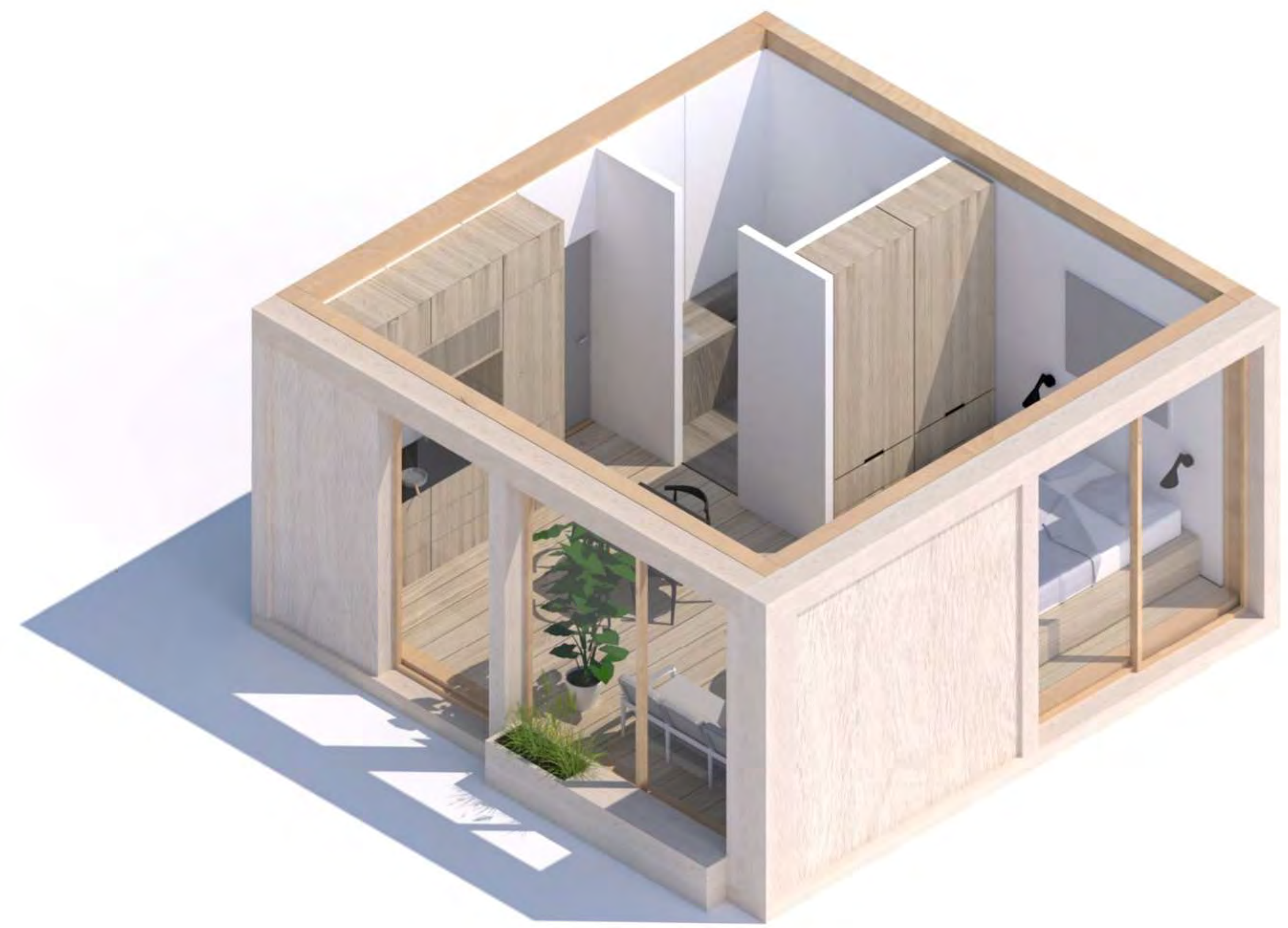
1 ton of CO₂ is locked per 1 m³ of timber product manufactured



Building with sustainably sourced timber enables faster construction and minimized waste through prefabrication, flatpack transportation, quick and efficient assembly, and a healthier indoor climate.



A STANDARDIZED BUILDING MODULE
6 X 6 m



A MODULAR HOME
Built in wood



CLOSED



WINDOW



BENCH



PLANTER BOX



BALCONY



LOUVERS

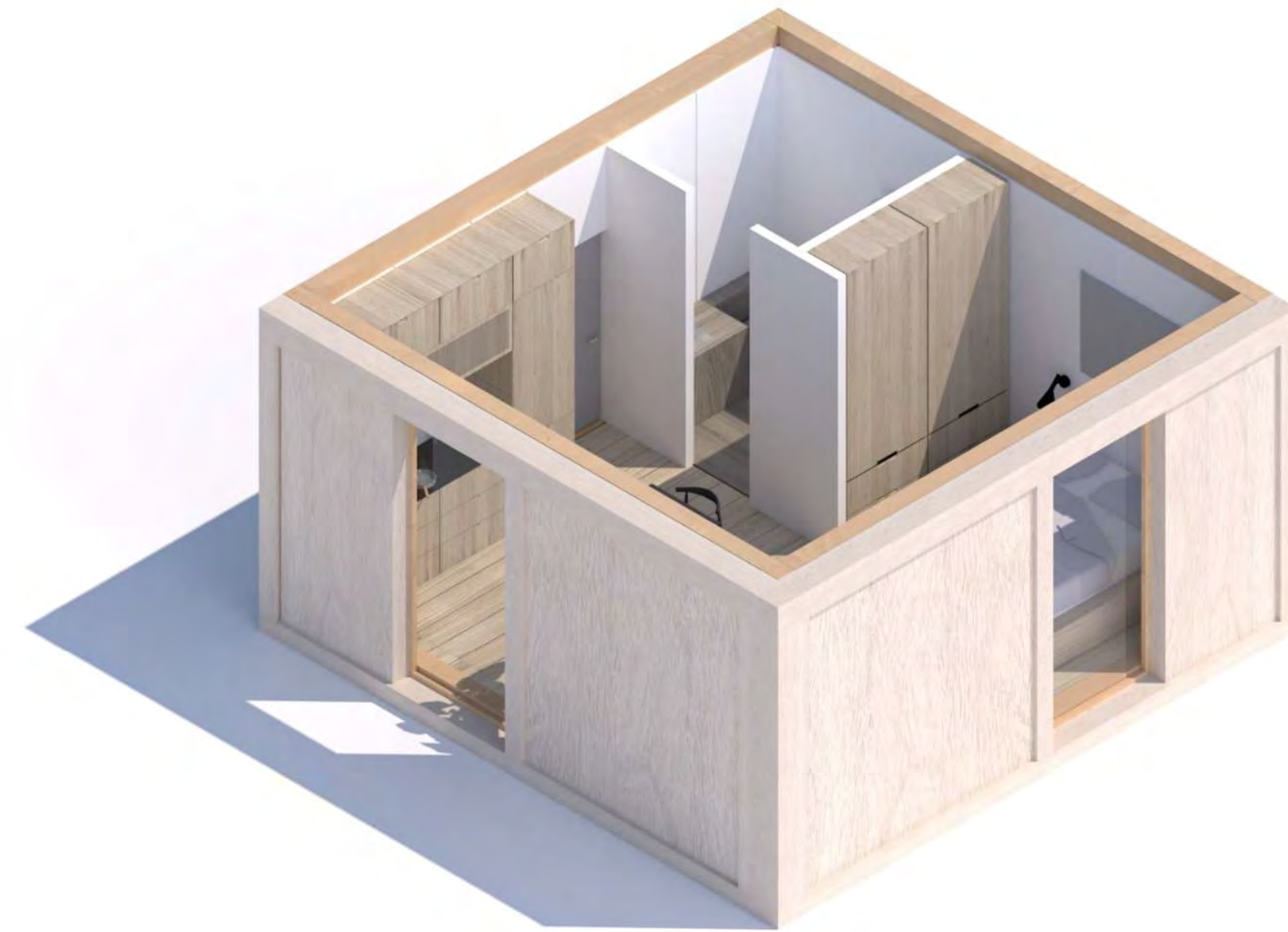


PINBOARD

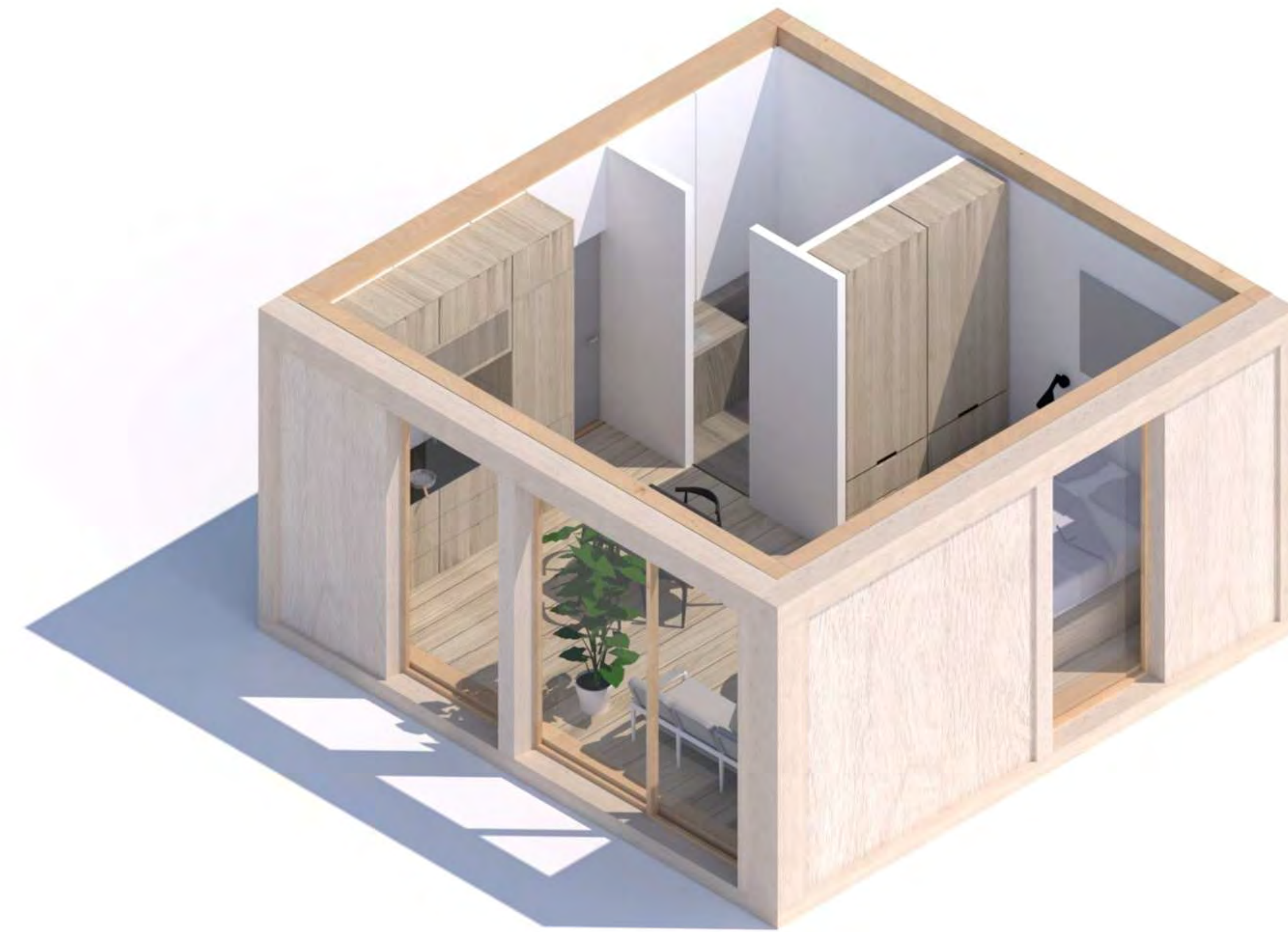


TRELLIS

A MODULAR HOME
Enabling flexibility and customization



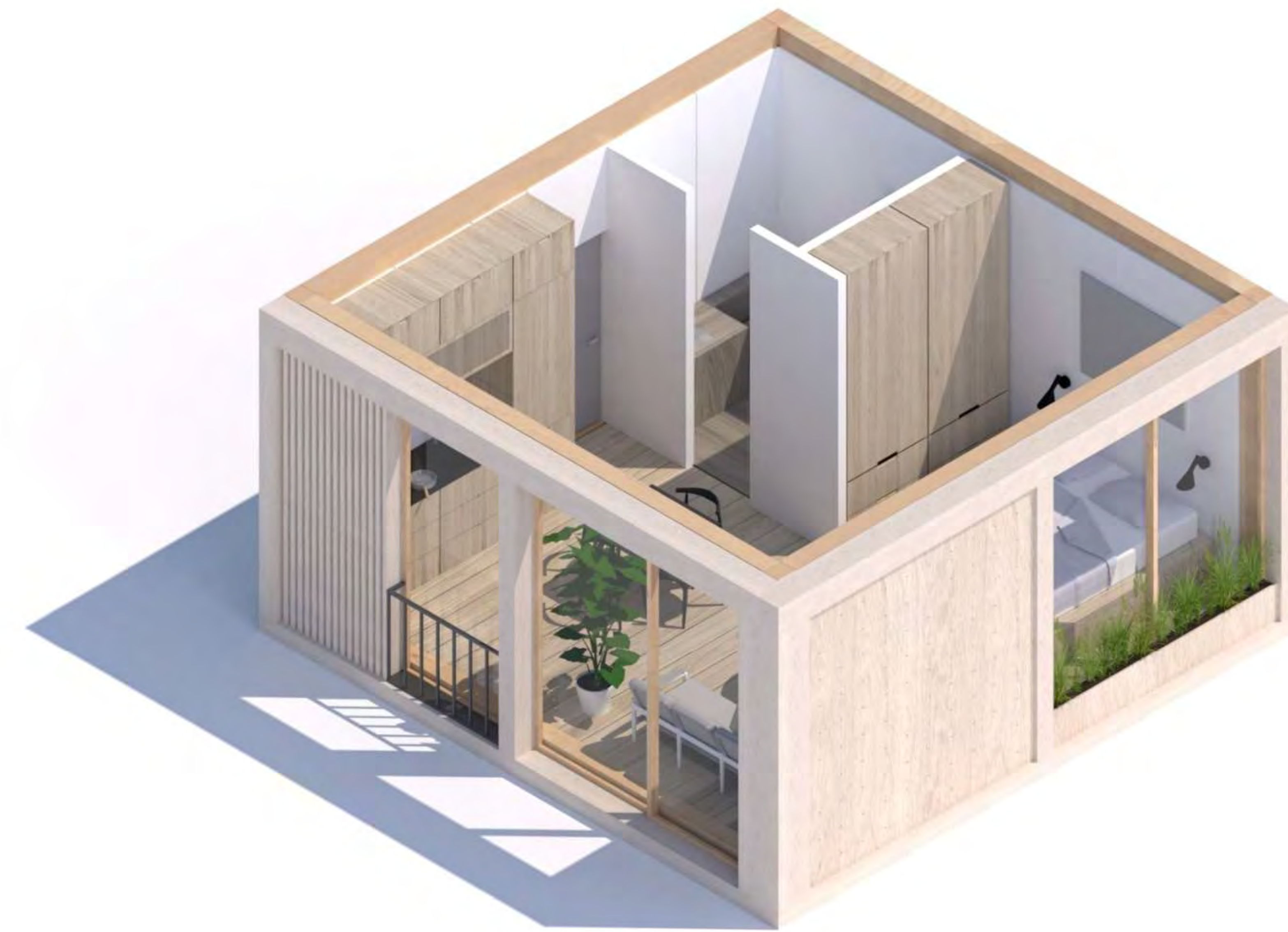
FACADE CUSTOMIZATION



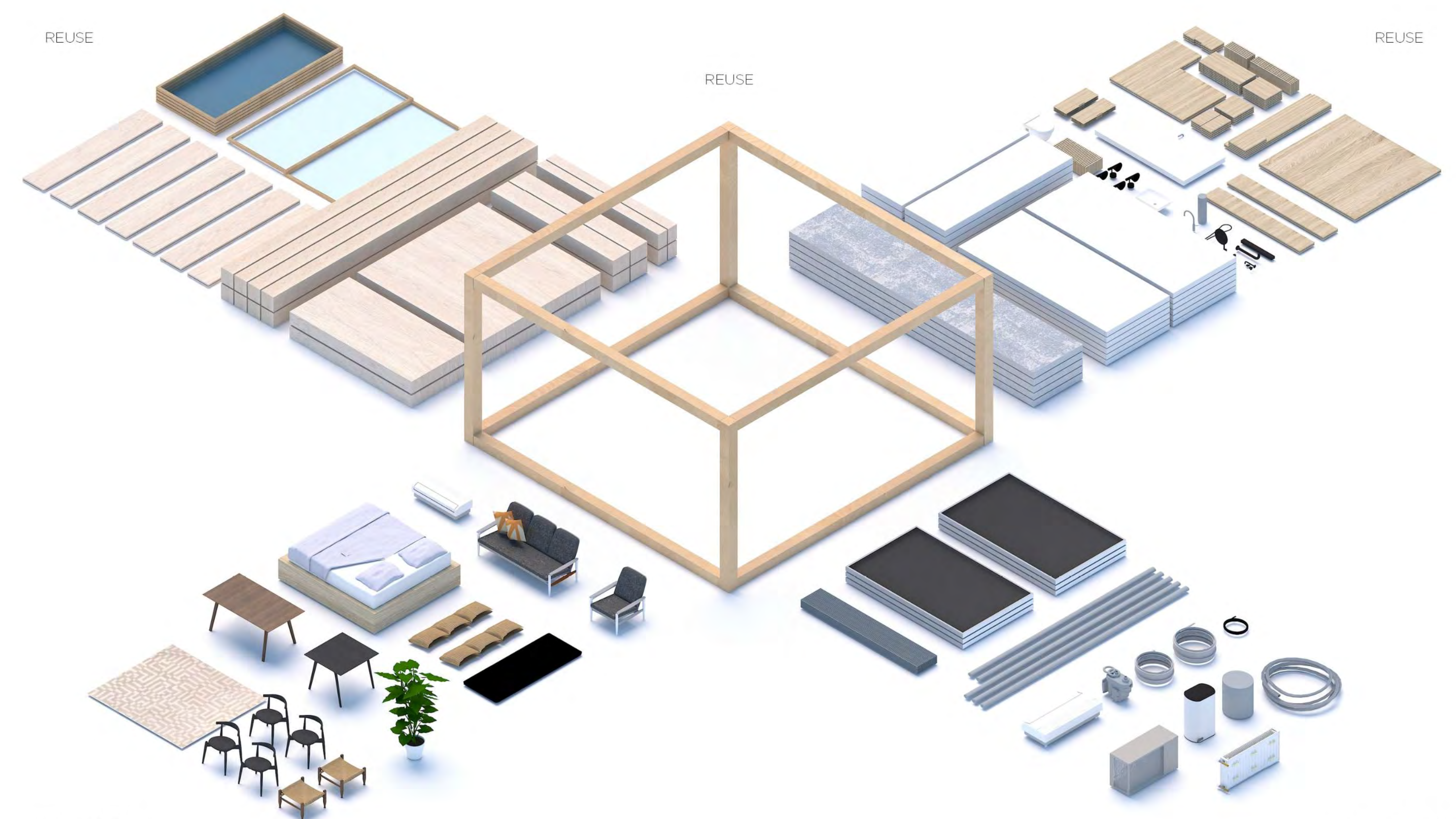
FACADE CUSTOMIZATION



FACADE CUSTOMIZATION



FACADE CUSTOMIZATION



REUSE

REUSE

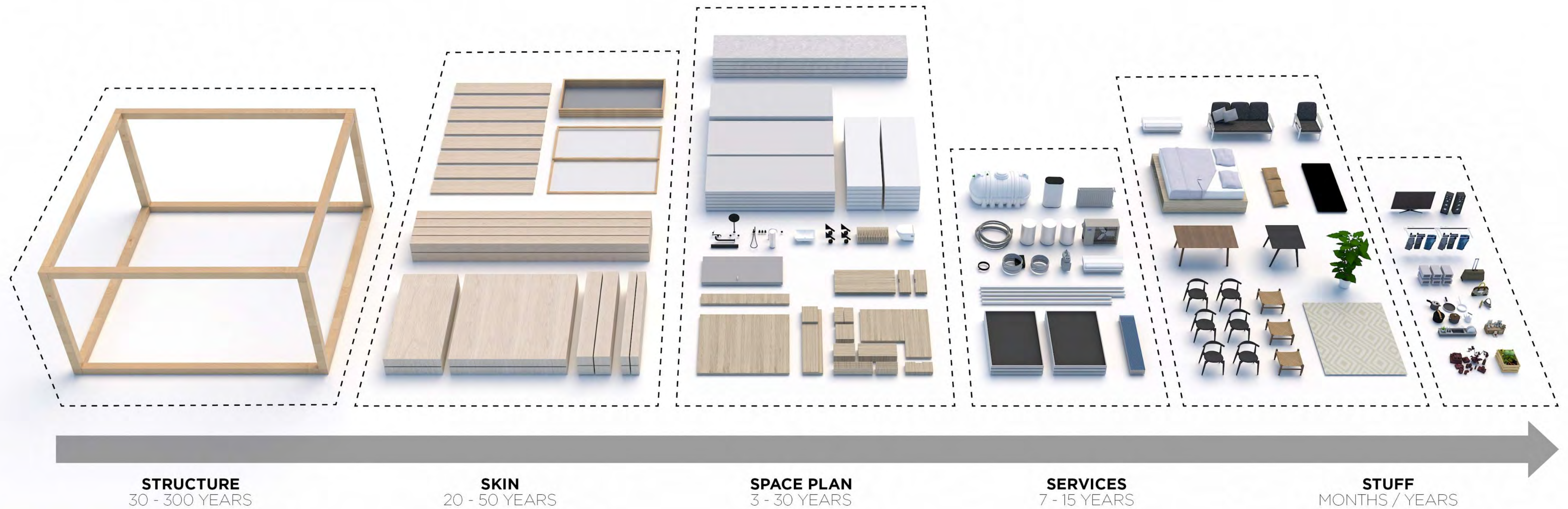
REUSE

REUSE / RECYCLE /
UPCYCLE

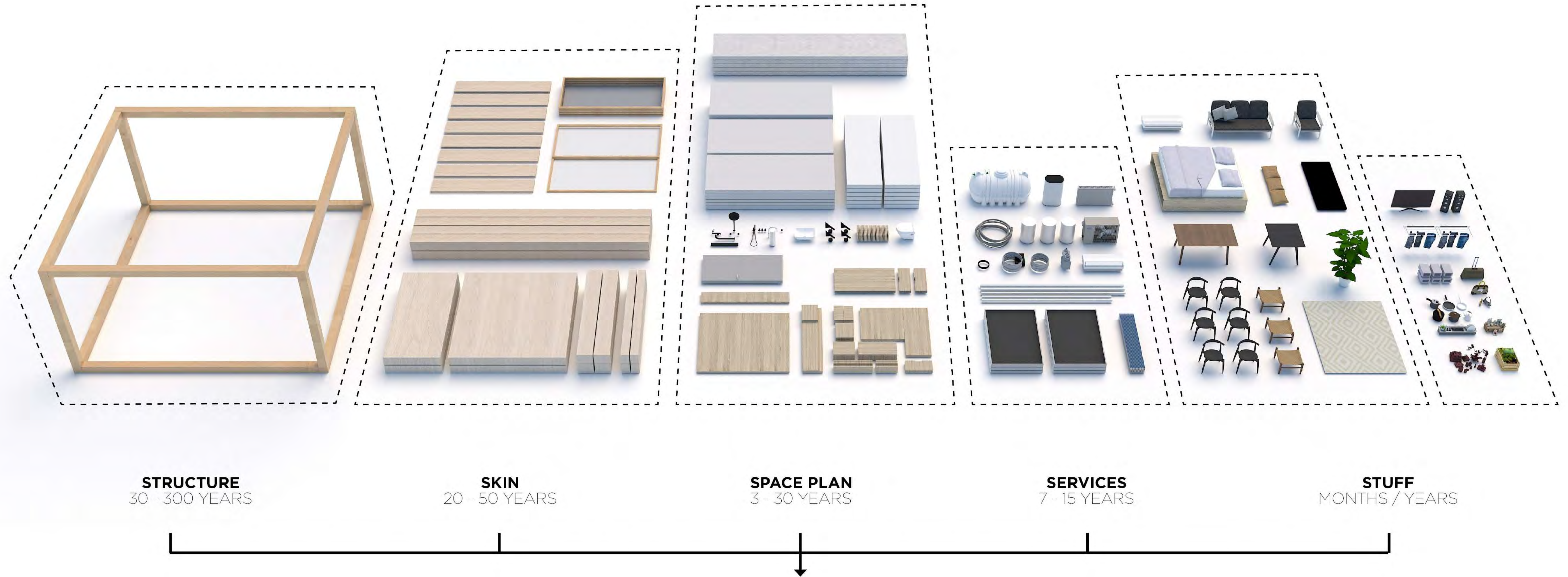
REUSE / RECYCLE /
UPCYCLE

A MODULAR HOME

Designed for Disassembly



LIFESPAN OF BUILDING COMPONENTS



HOME AS A SERVICE MODEL

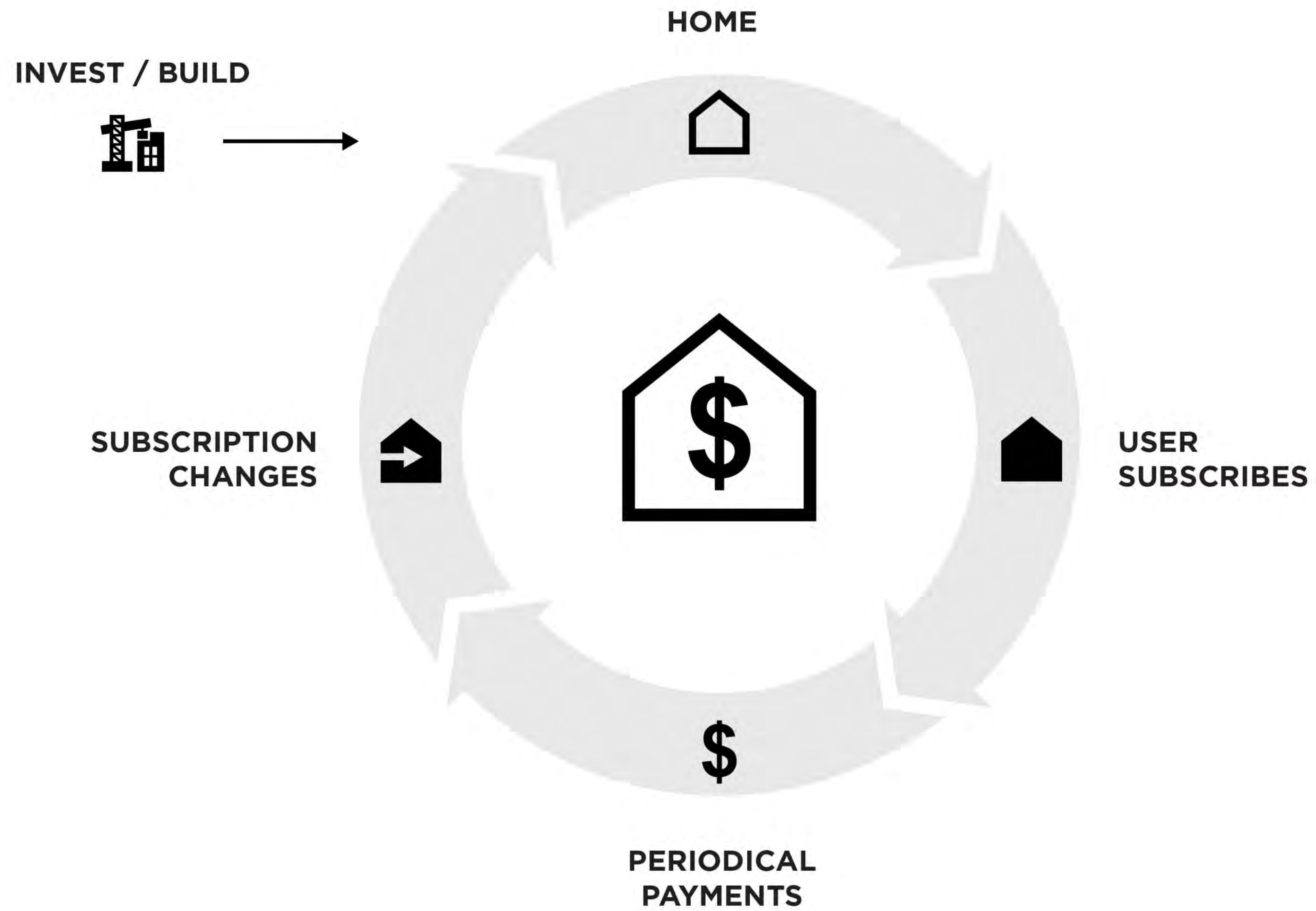
The building systems allows for a new subscription based model for housing, where developers and companies are able to turn their product into subscription.

**WHAT IF A NEW FORM OF OWNERSHIP COULD
UNLOCK HOUSING FOR THE MANY PEOPLE?**

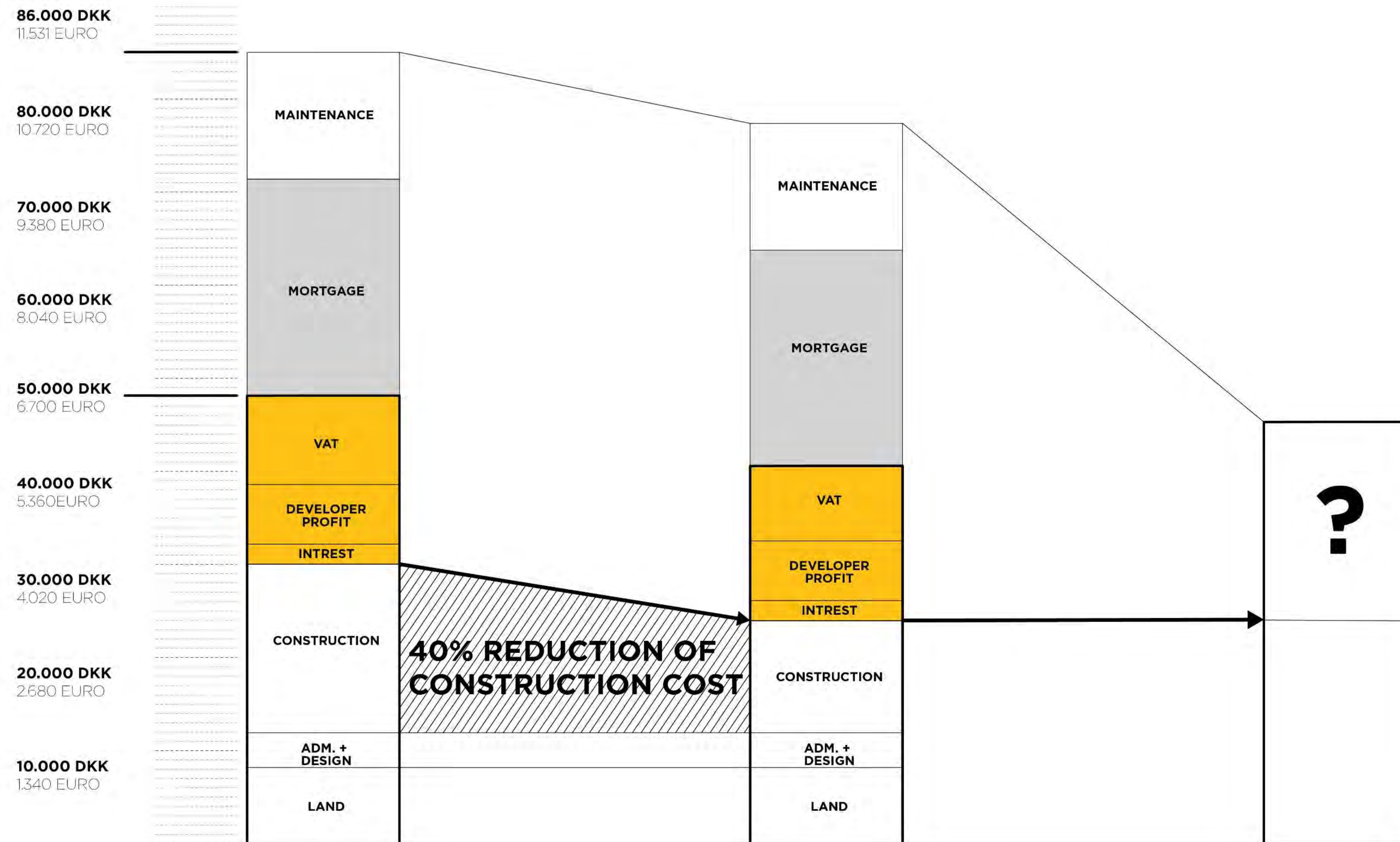
HOME AS A SERVICE
A NEW FINANCIAL MODEL



From traditional business model ...



... to circular economic model



REDUCTION OF CONSTRUCTION COST

With the prefab construction system we could cut construction cost by 30% and construction time by 50% but as cost of construction only accounts for 20 % of the total cost we had to figure out how we could reduce on the other costs









OWNERSHIP

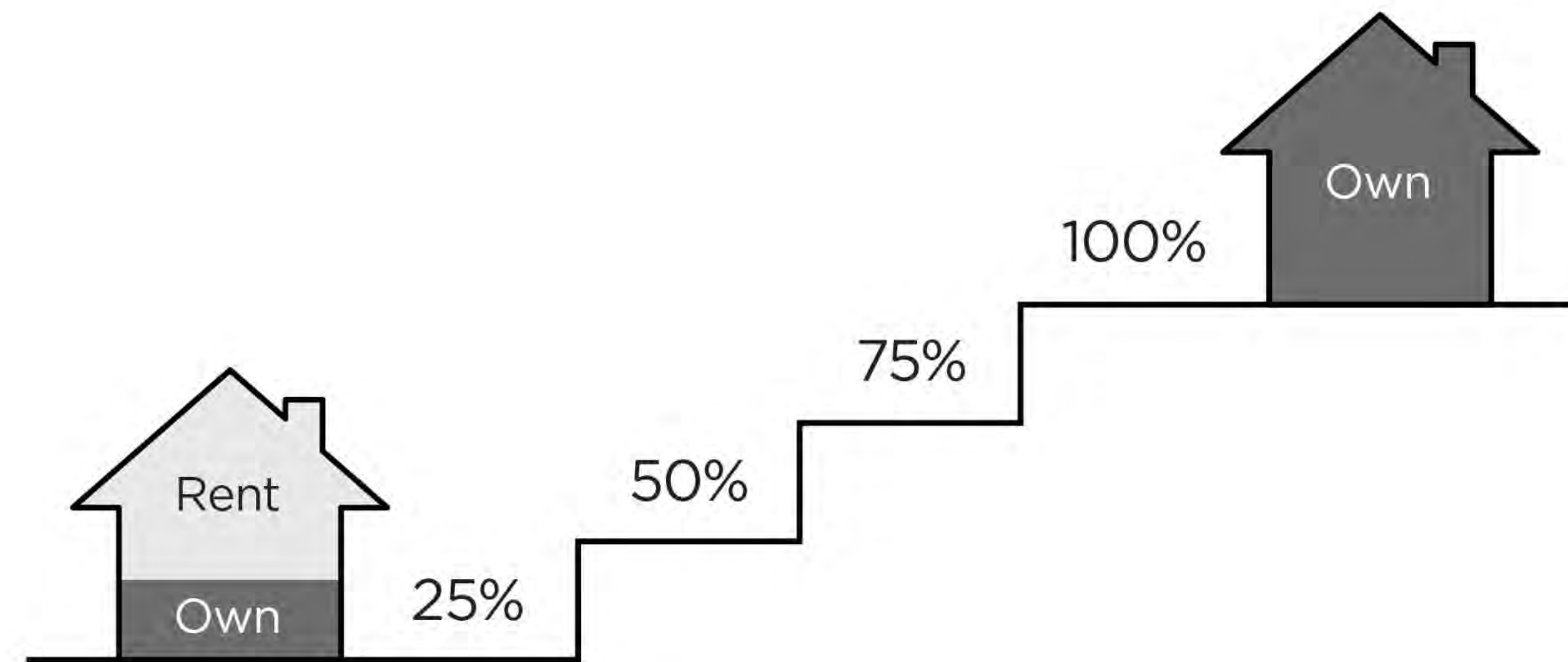


**SHARED
EQUITY**

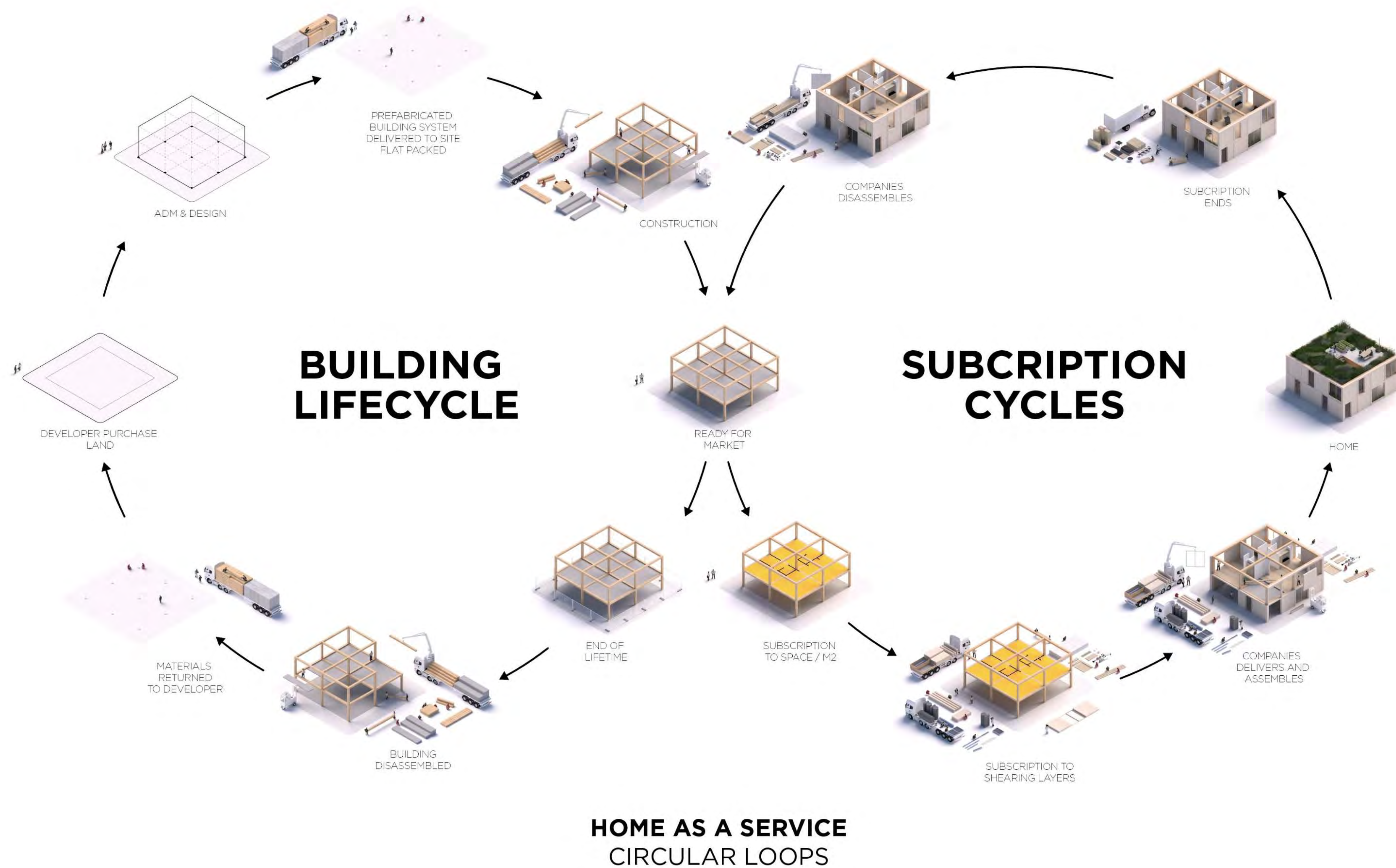


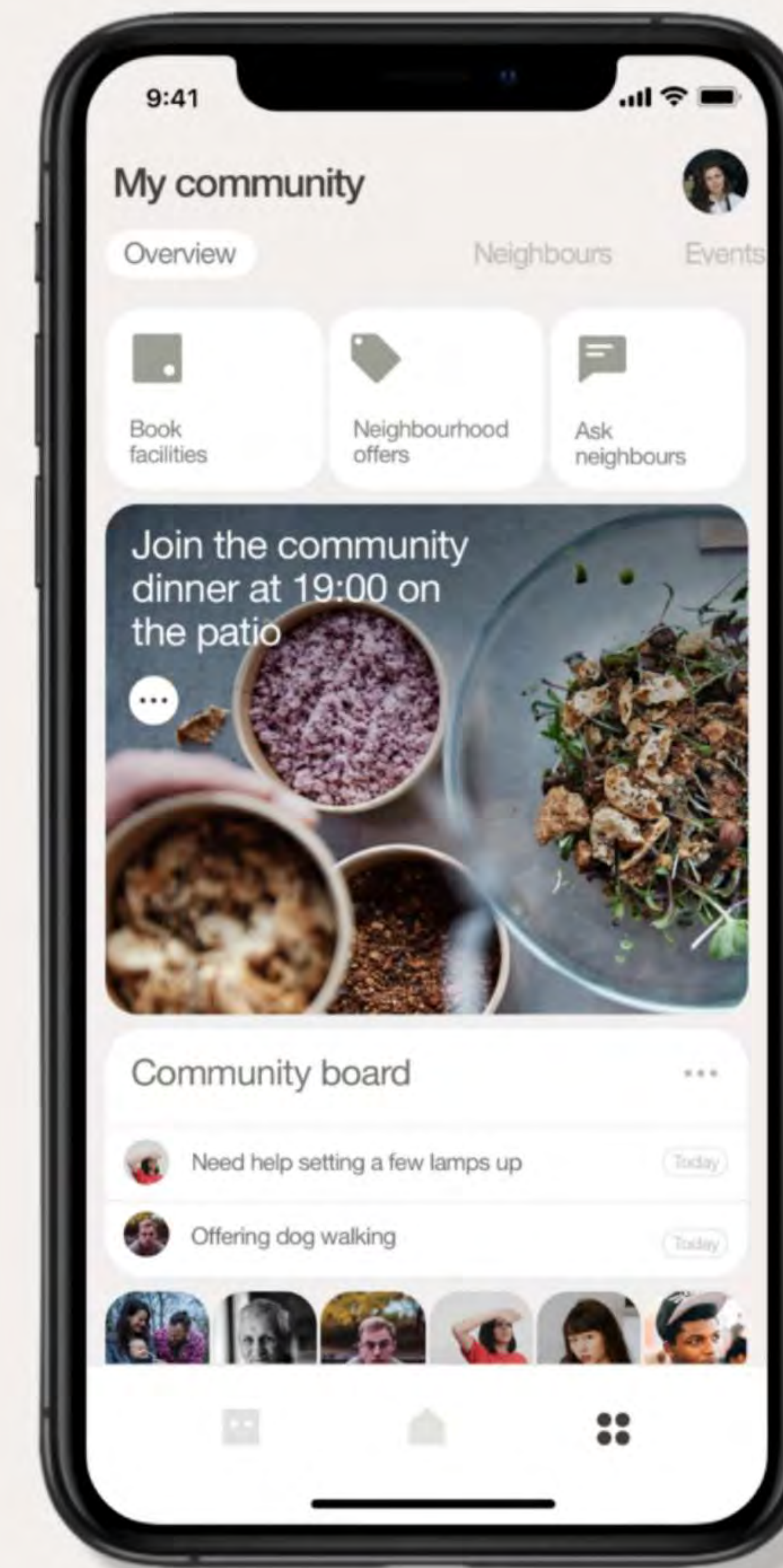
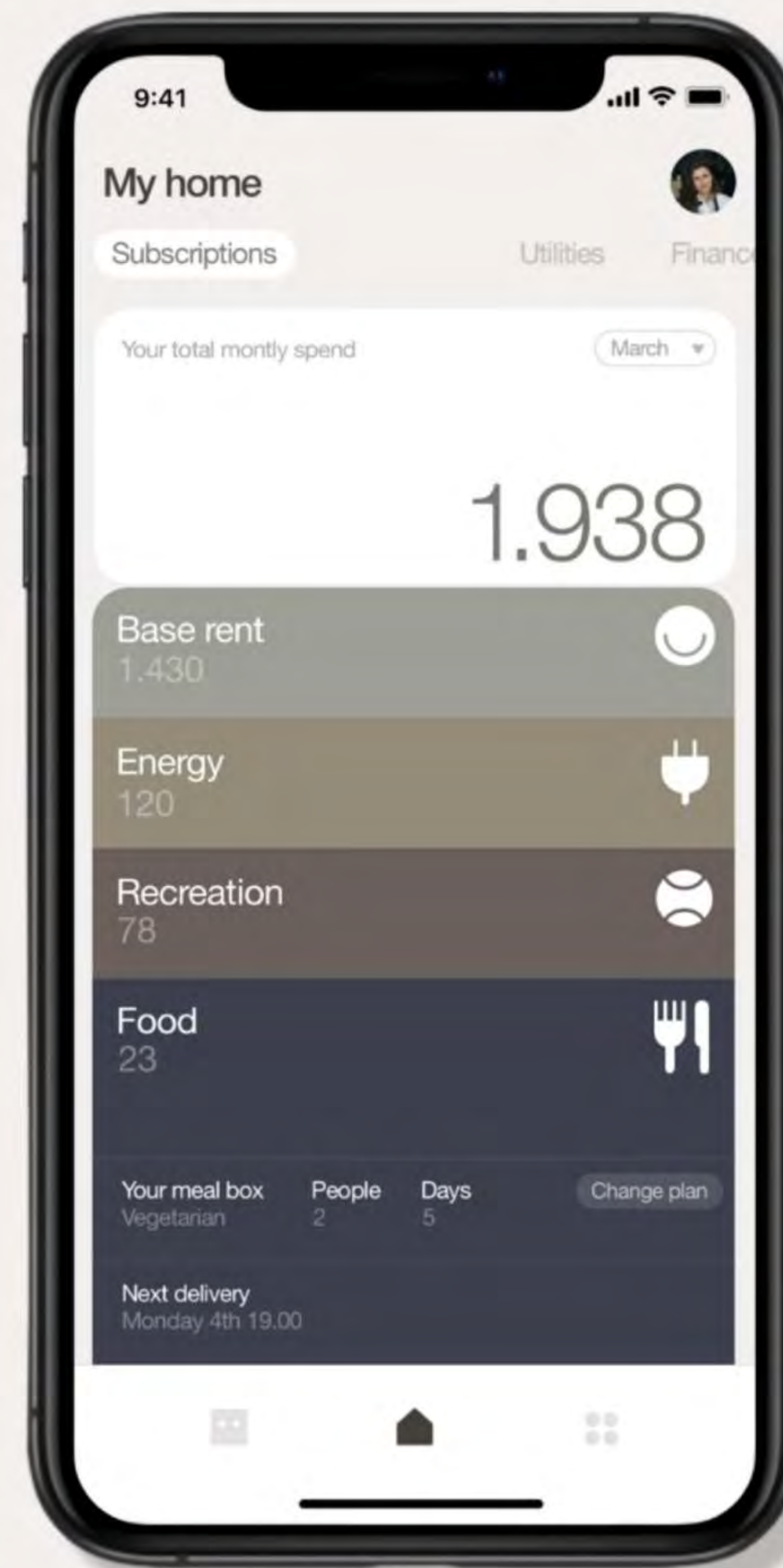
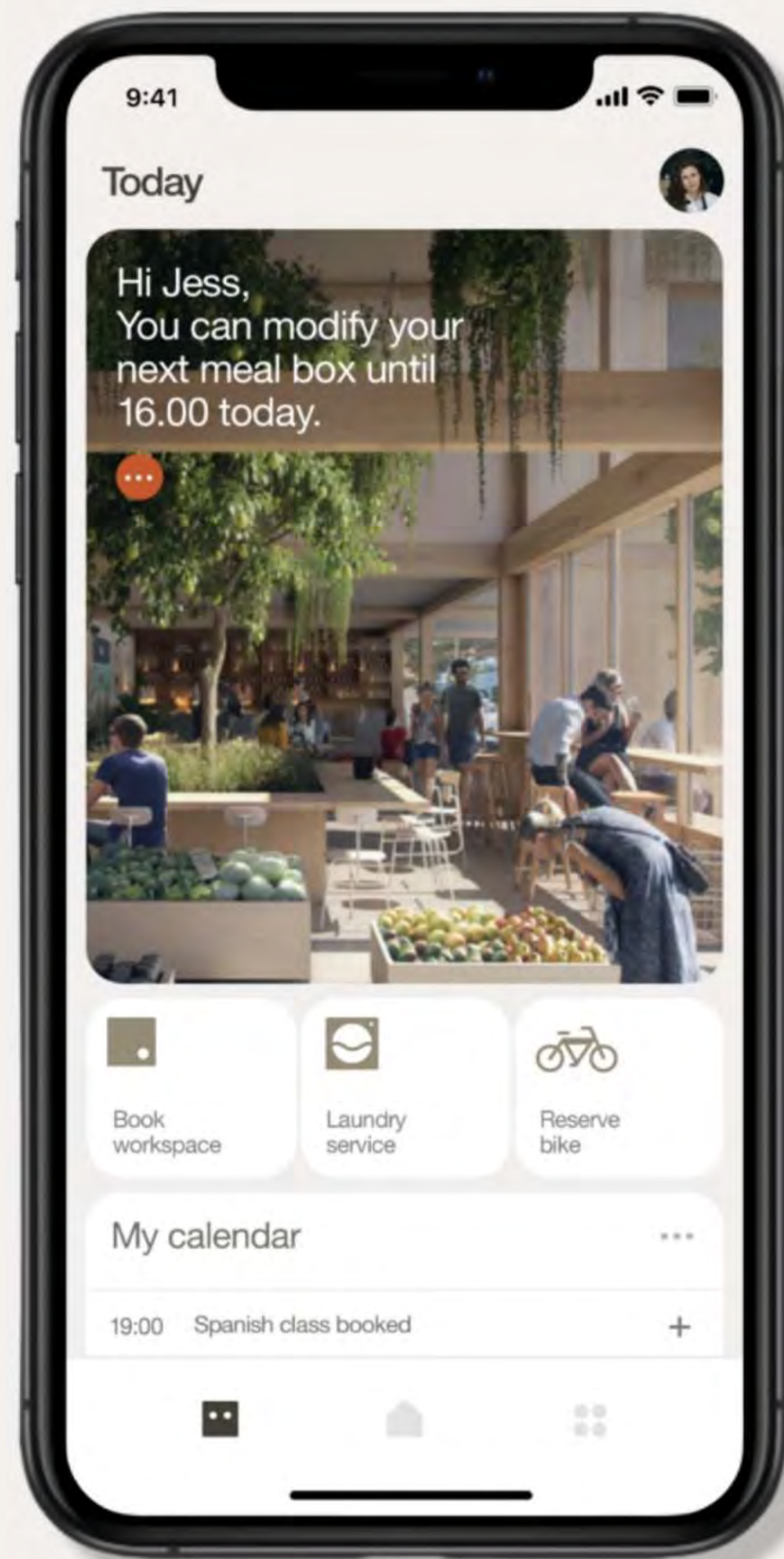
RENT

SHARED EQUITY



Allowing homeowners to build equity as and when they can afford it

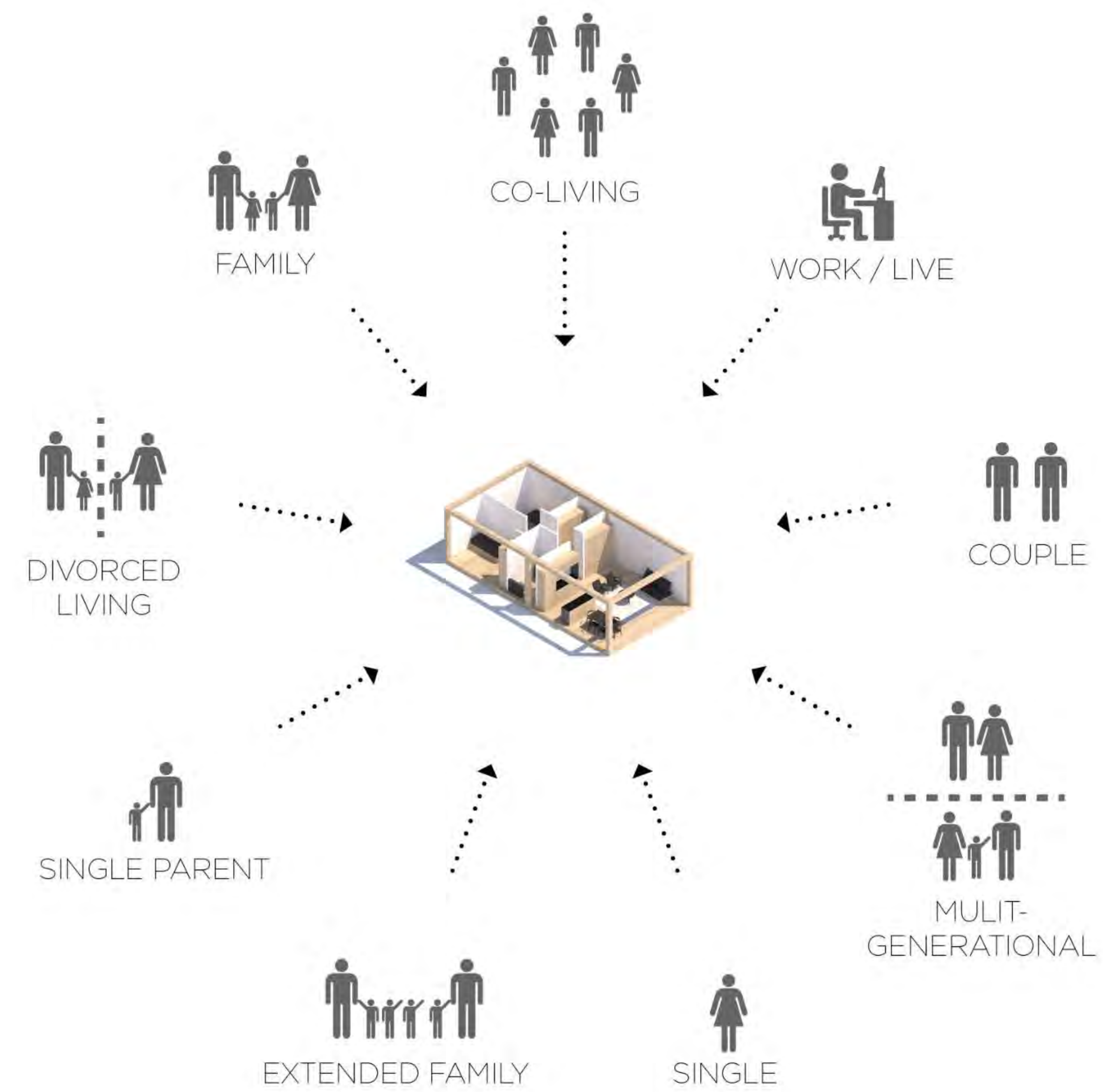




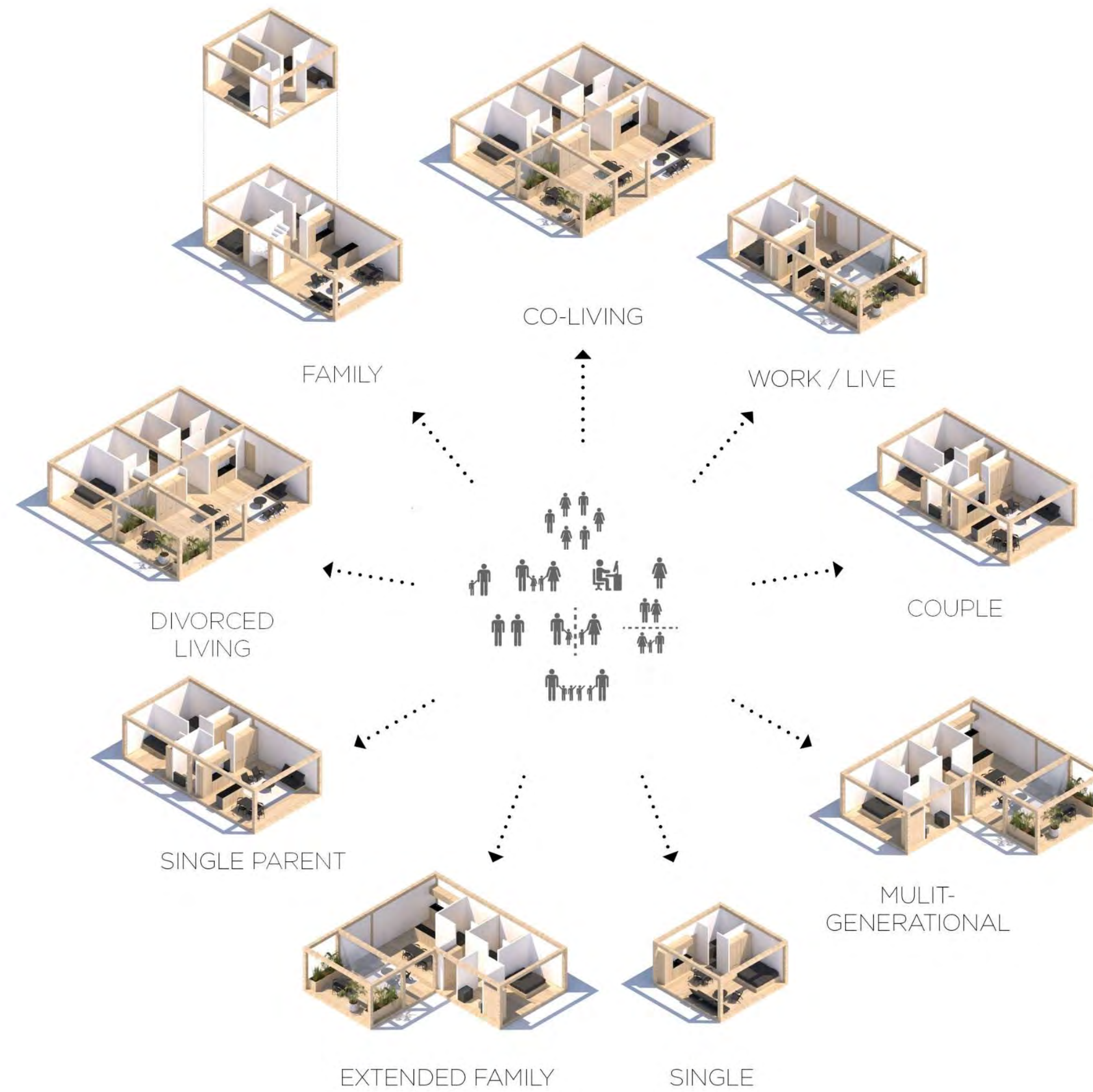
HOME AS A SERVICE
YOUR HOME AT YOUR FINGERTIPS

**WHAT IF WE COULD CREATE THRIVING COMMUNITIES
THAT BENEFIT THEIR SURROUNDINGS?**

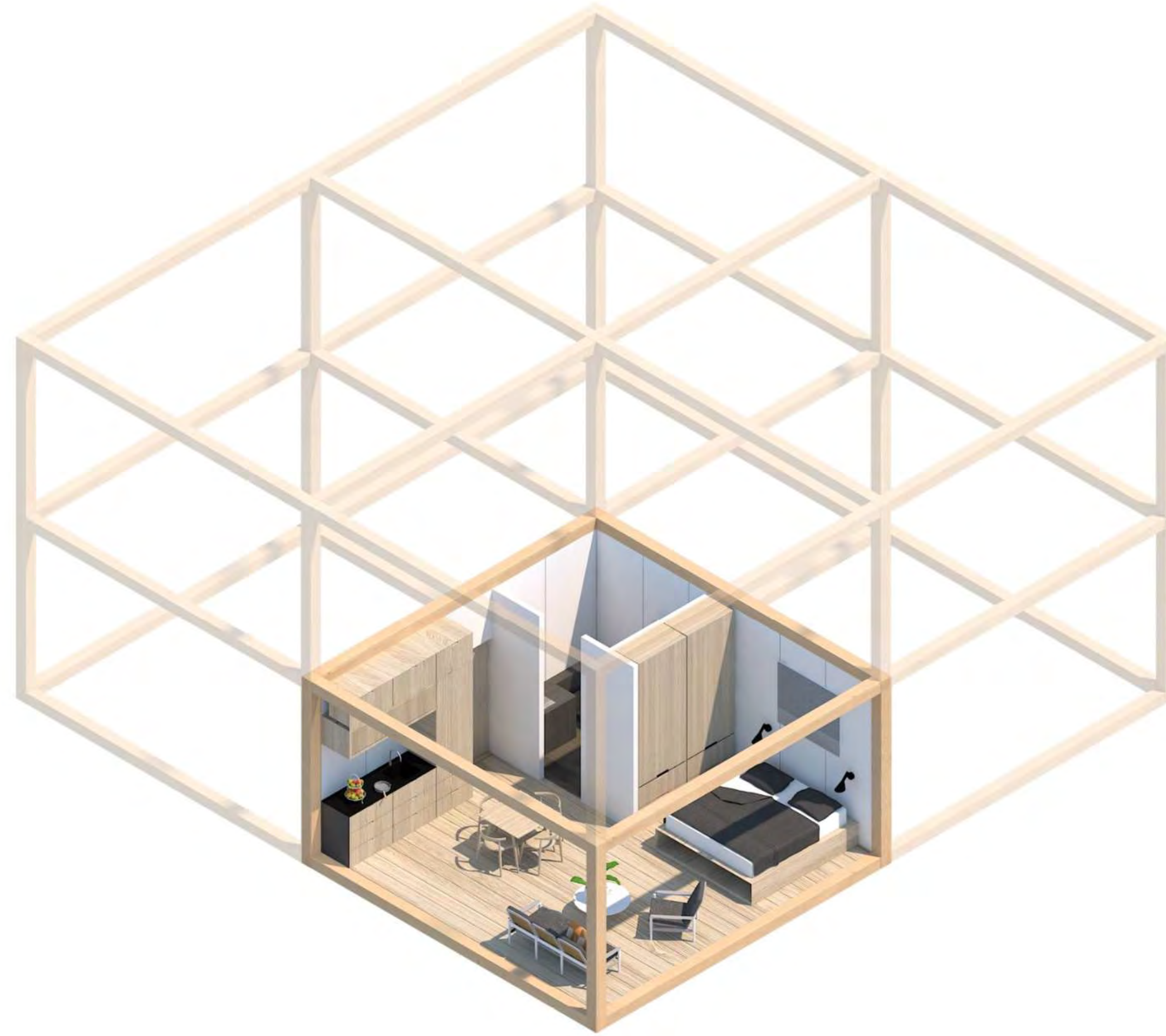
SHARED LIVING
ACCESS OVER OWNERSHIP



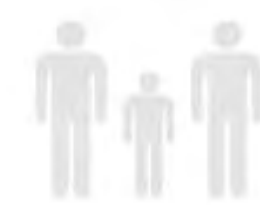
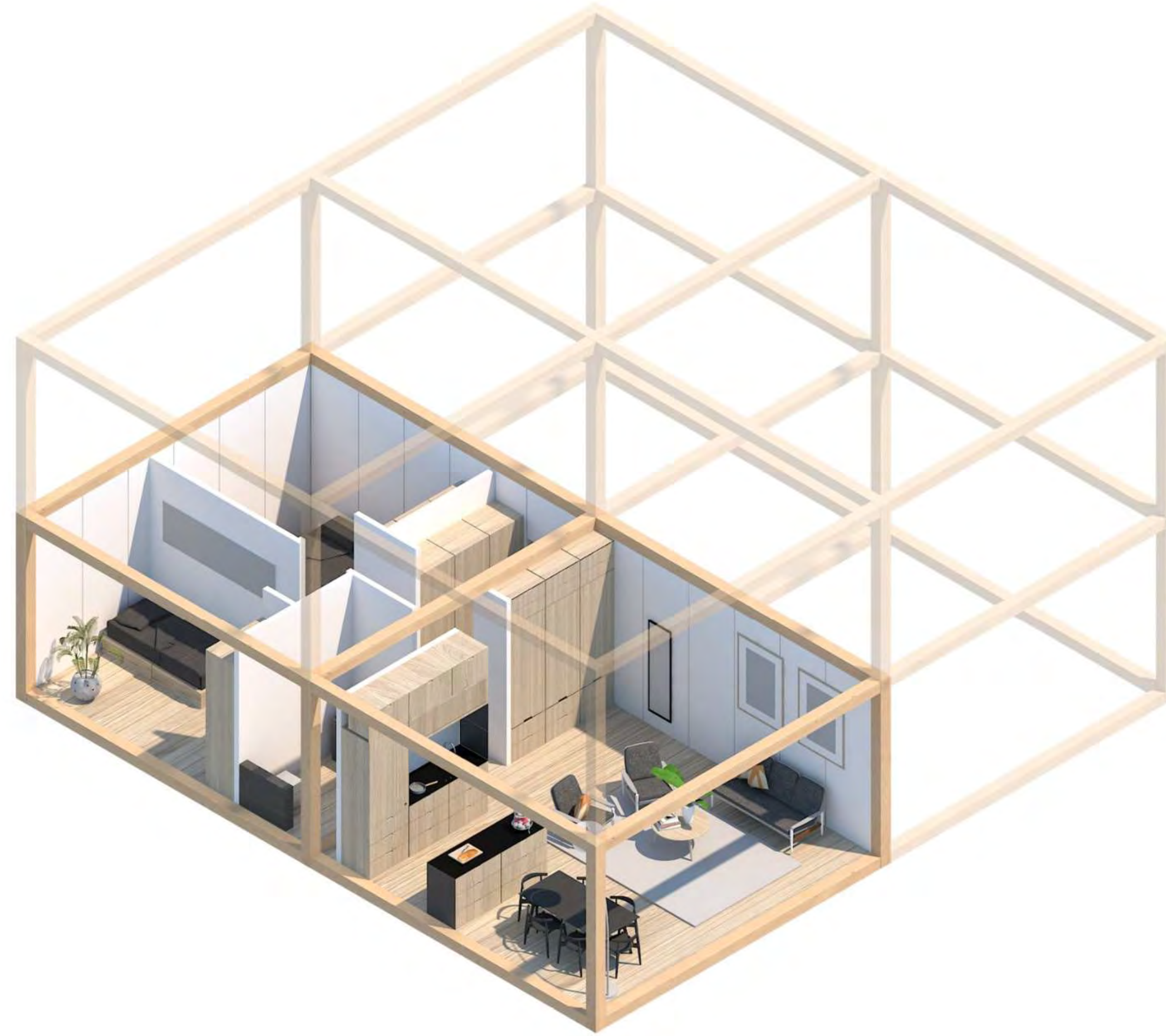
FROM ONE SIZE FITS ALL



TO TAILORING APARTMENT TYPES
FOR MODERN LIFESTYLES



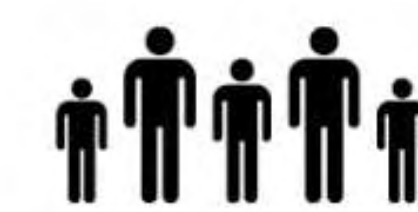
A HOME FOR LIFE
36 M2



A HOME FOR LIFE
72 M2



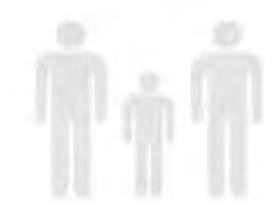
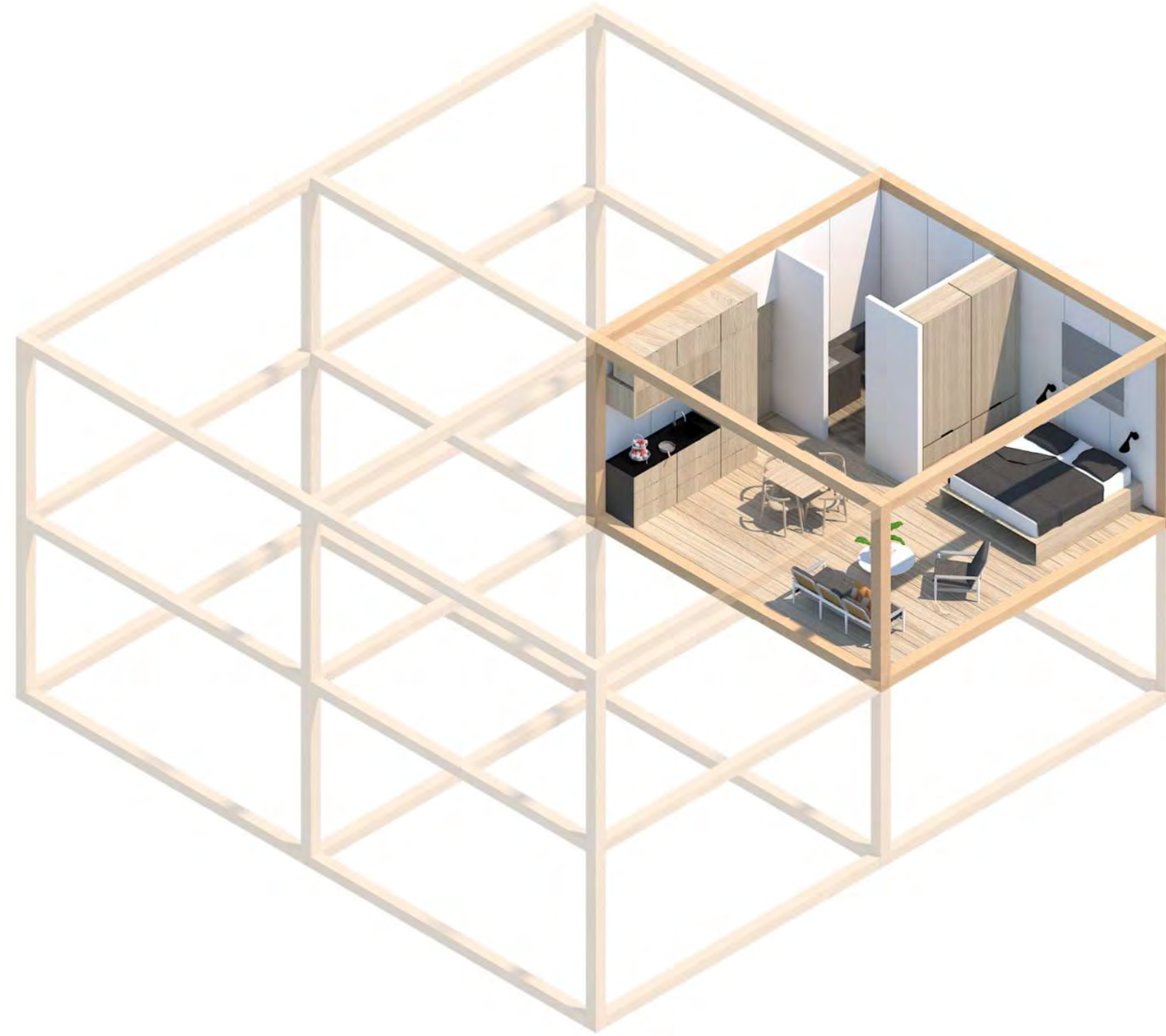
A HOME FOR LIFE
108 M2



A HOME FOR LIFE
144 M2

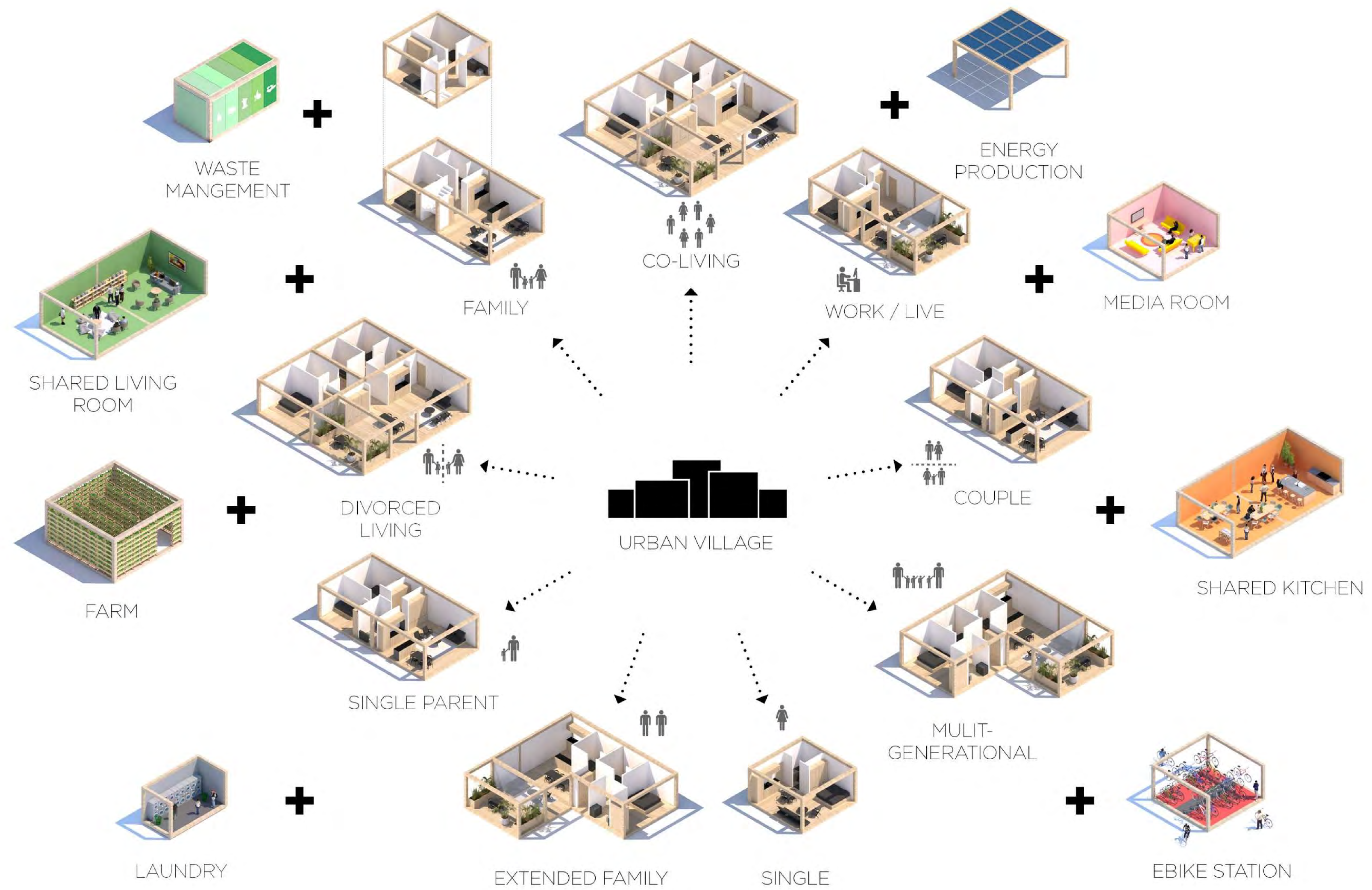


A HOME FOR LIFE
108 M2

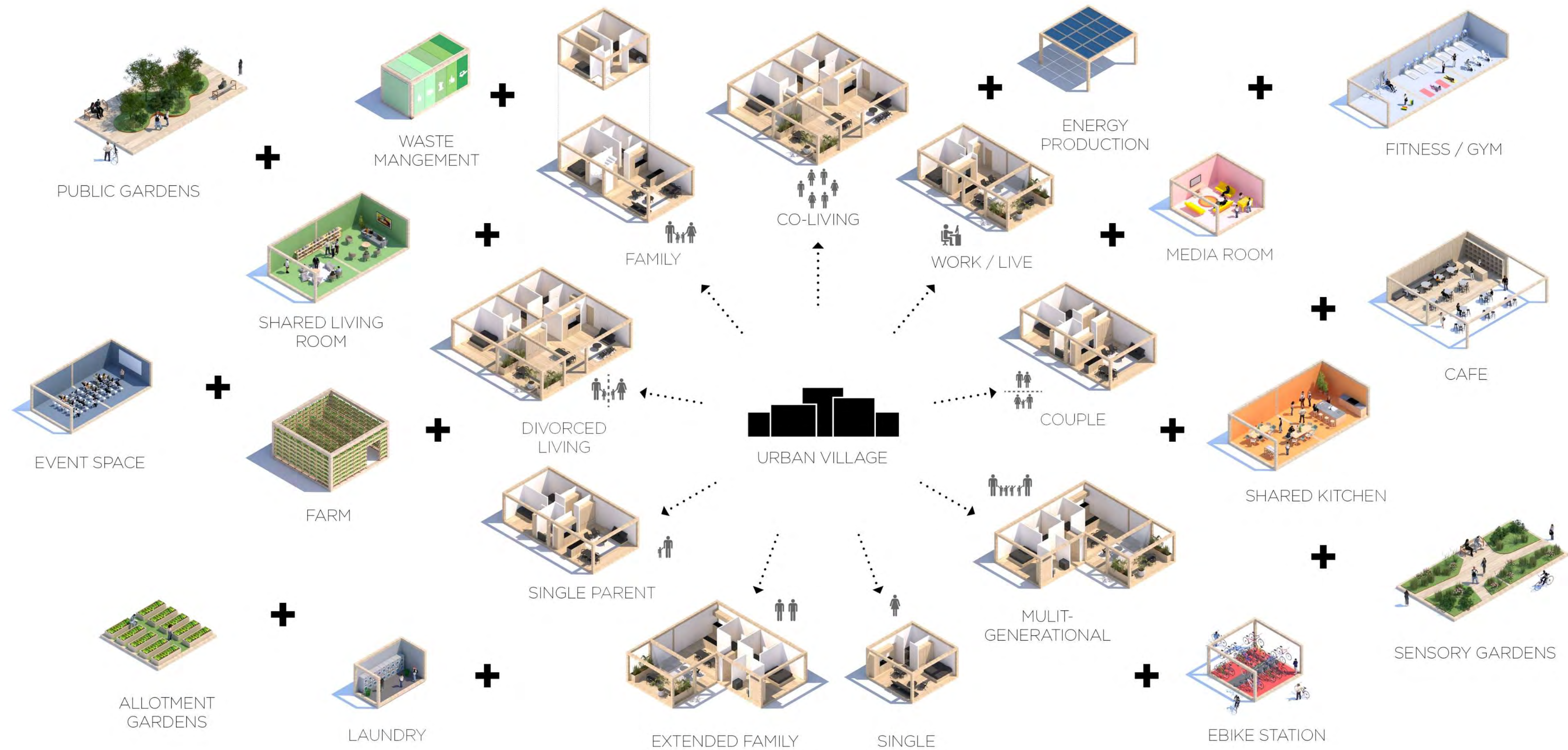


A HOME FOR LIFE
36 M2



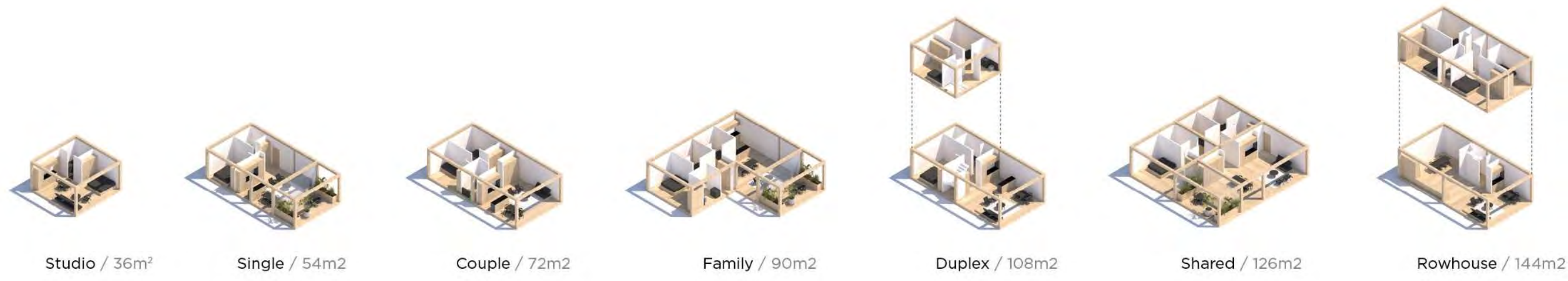


SHARED AMMENITIES
ACCESS OVER OWNERSHIP

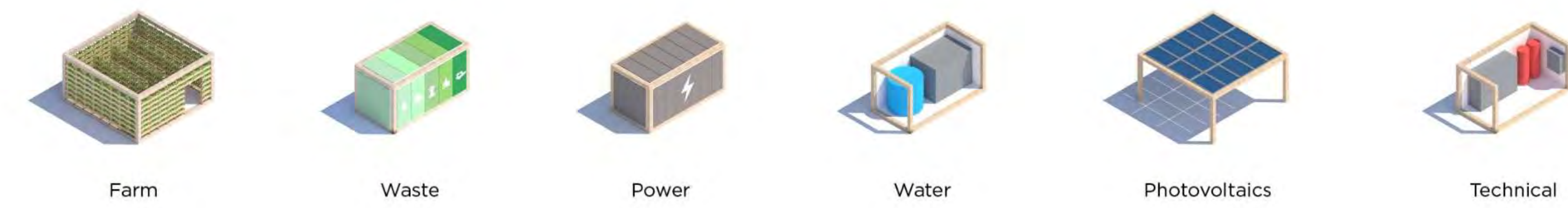


PUBLIC PROGRAM
ACCESS OVER OWNERSHIP

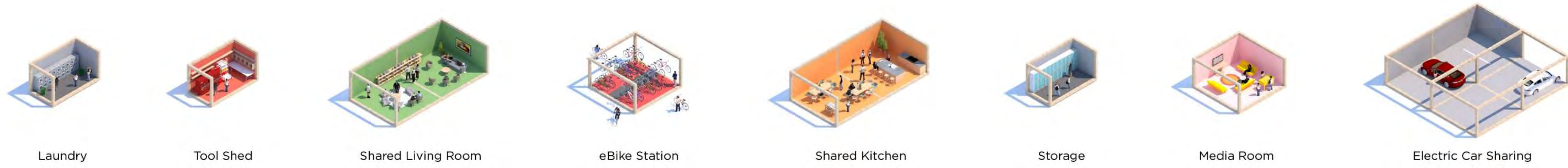
HOUSING UNITS



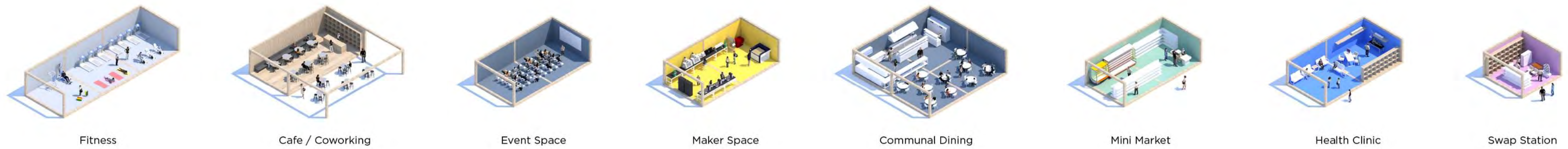
UTILITIES



PRIVATE SERVICES



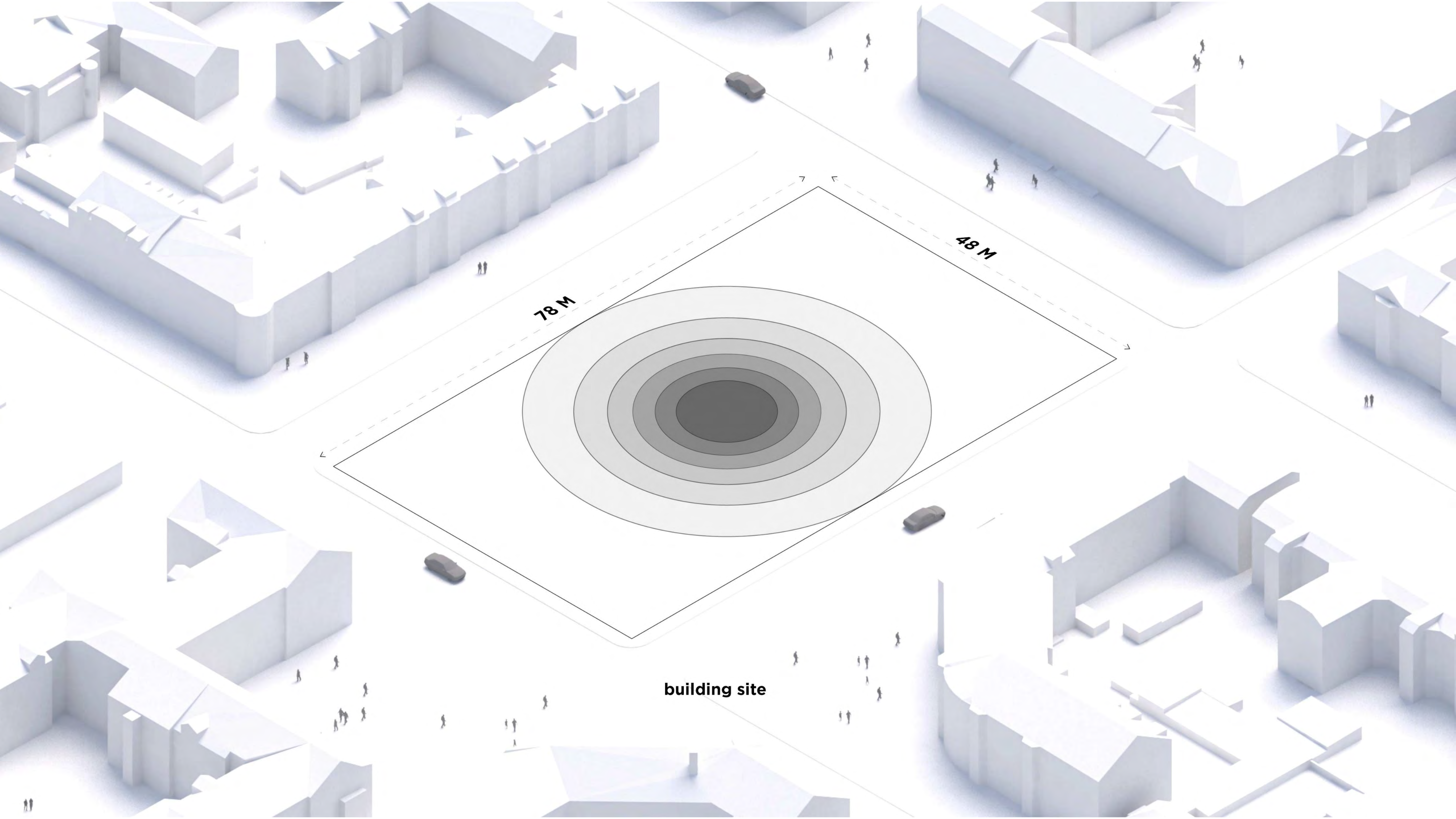
PUBLIC SERVICES



GREEN SPACES



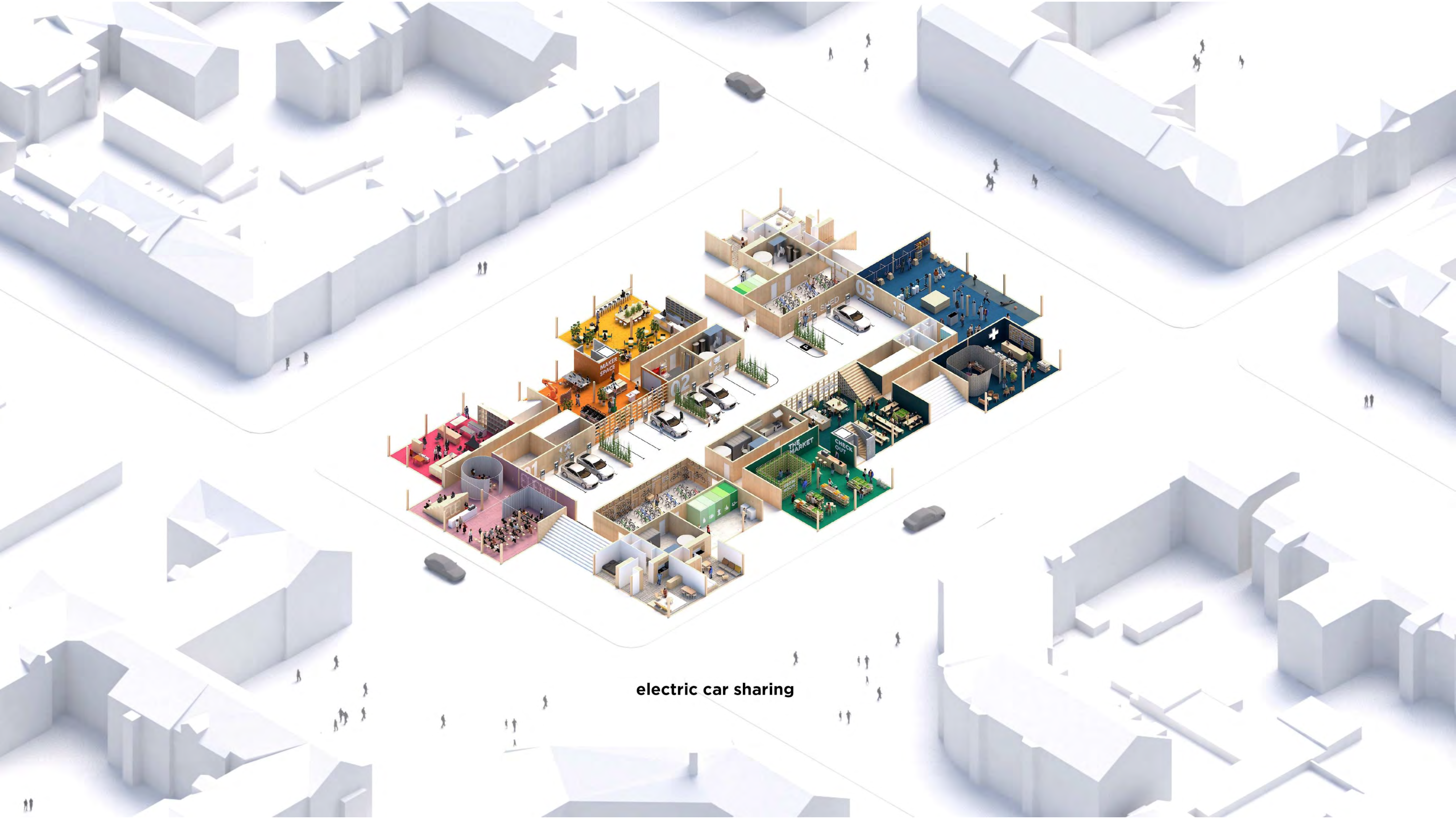
URBAN LEGO BLOCKS



building site



social public program



electric car sharing



public spaces



private social program + gardens



living



social green roofs



integrated energy production



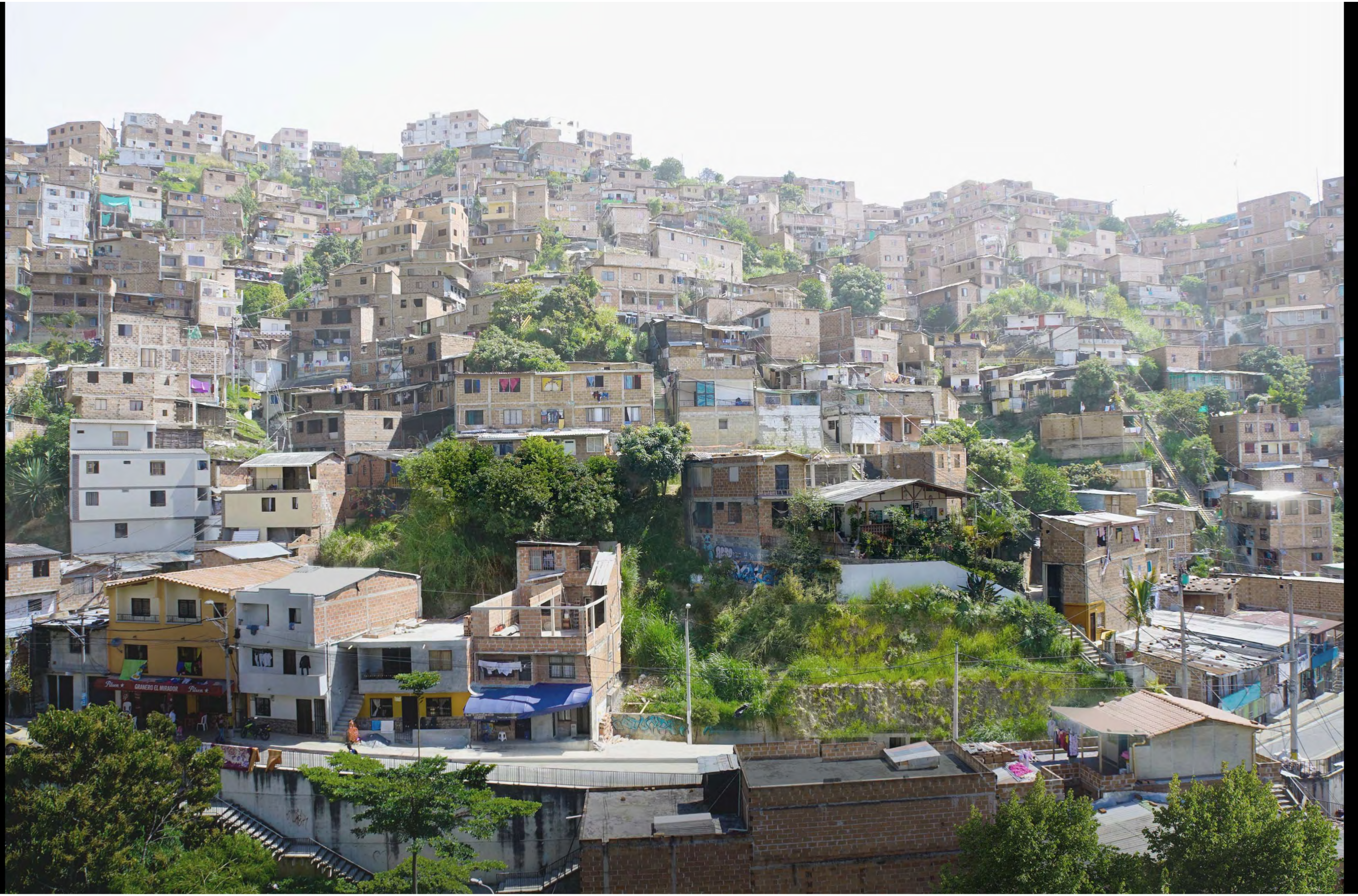




















One car in 1900



One horse in 1913



Before smartphone 2005



After smartphone 2013



Greta Thunberg starts striking in 2018



Millions join biggest climate protest ever in 2019

**Technology + Design + Aspiration
= Impact**

Policy over popularity

Ethics over aesthetics

Responsibility over revenue

Thanks