



# Ccents

**Circular Economy Network+  
in Transportation Systems**

**ECOFITTING**

**whole-life design upgrading cars to zero emissions**

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# Rationale



The **UK requirements** for Ultra Low Emission vehicles will create a fleet of **15 million non-compliant ICE cars in the UK.**

Ecofitting proposes a new **circular economy strategy** to contribute towards zero-emissions in a sustainable manner by **retrofitting the existing fleet of ICE cars.**

This involves **not just electrification but, importantly, customisation and personalisation** of these vehicles to create **desirability**, promote behavioural change, and **long-term ownership.**

As such, **design is at the heart of Ecofitting.**

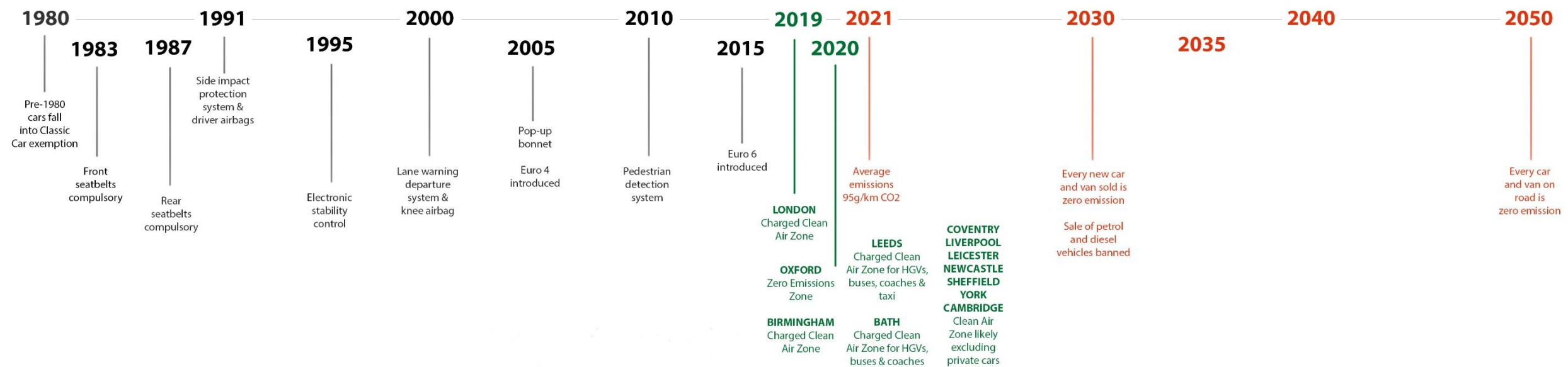
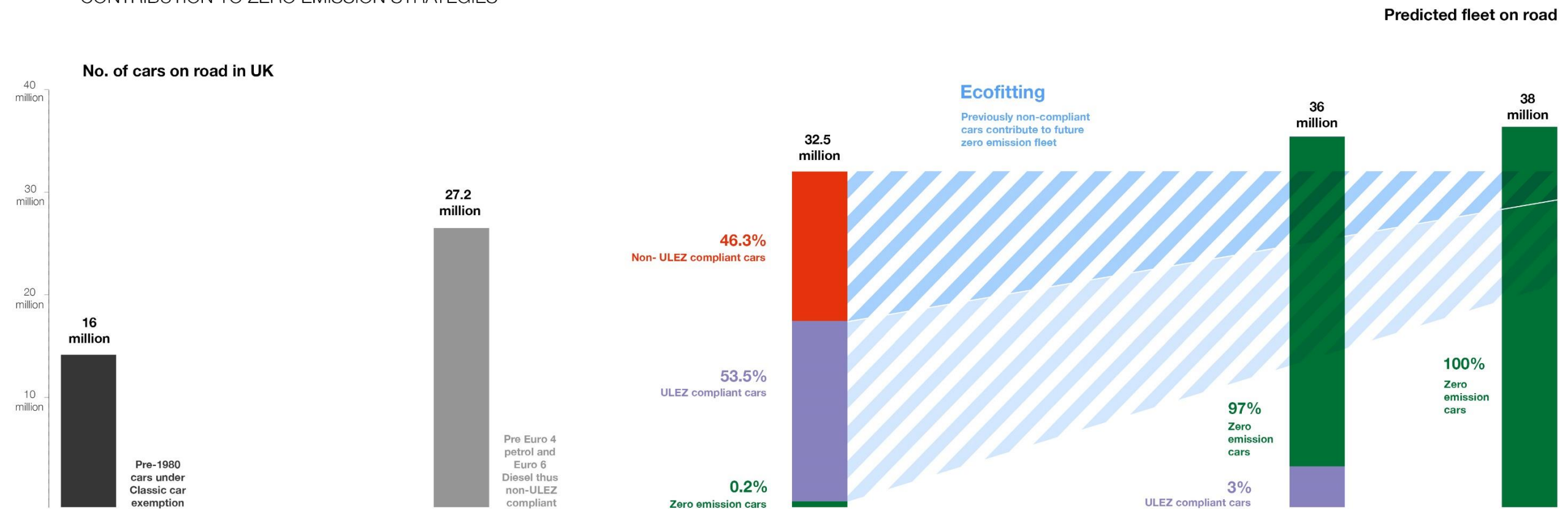
Converting classic cars to electric is a growing trend in small businesses and OEMs. This project aims to **expand this trend beyond classic cars.**

To investigate the feasibility of Ecofitting, the research explores **possible designs directions to demonstrate its potential.**

**Design Research** allows us to visualize the possible futures.

## ECOFITTING TIMELINE

CONTRIBUTION TO ZERO EMISSION STRATEGIES





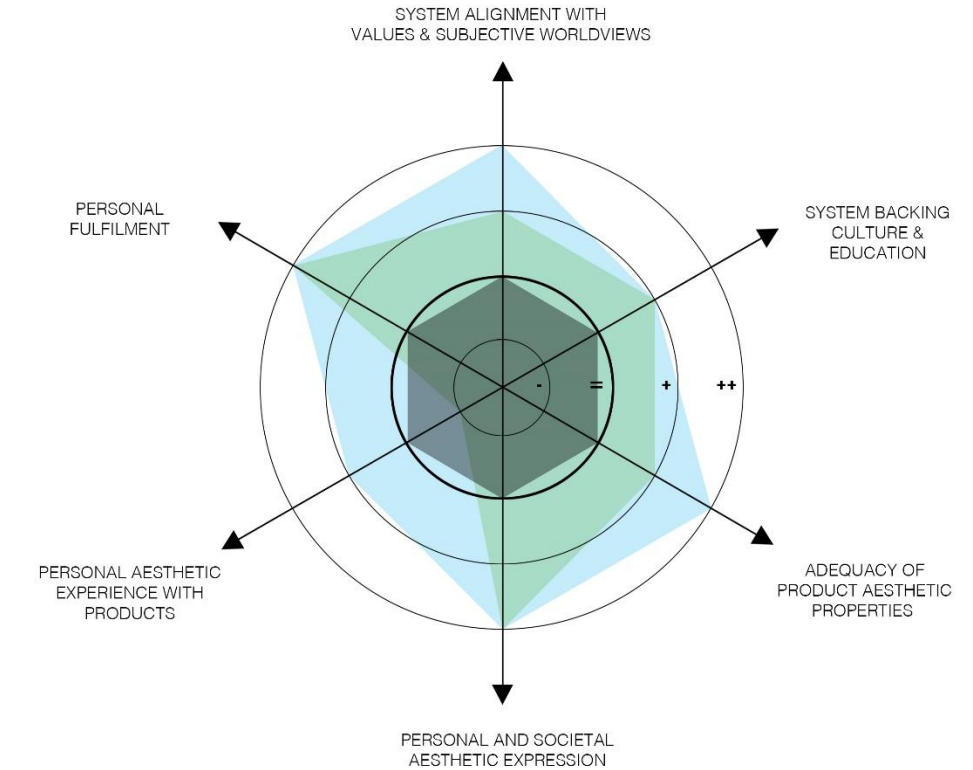
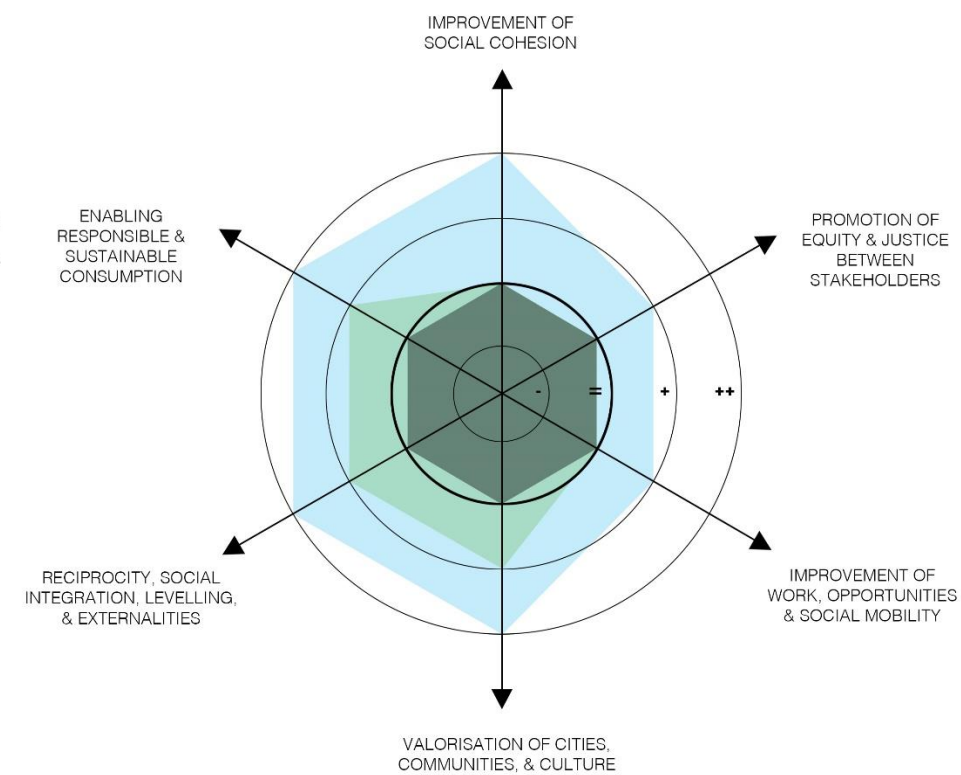
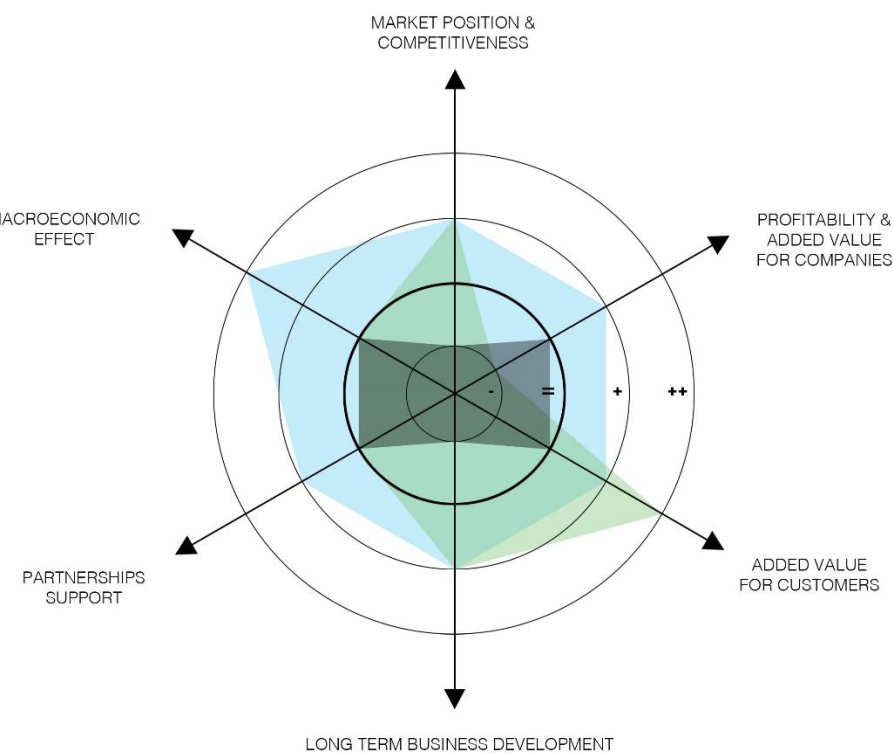
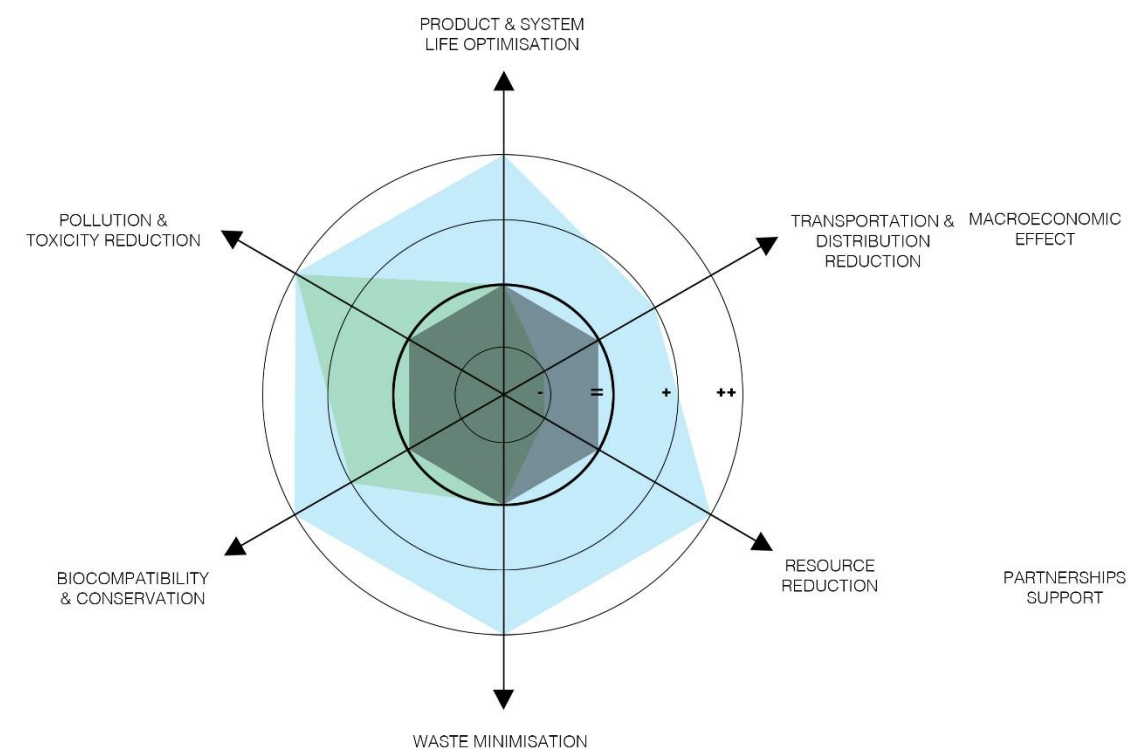
Quadruple Bottom Line of Sustainability. Design Toolkit.  
Strategies Comparison: **Ecofitting** | ICE | EV Industry

ENVIRONMENTAL SUSTAINABILITY

ECONOMIC SUSTAINABILITY

SOCIO-ETHICAL SUSTAINABILITY

SUBJECTIVE SUSTAINABILITY



ICE  
ELECTRIC VEHICLES  
ECOFITTING

- Benefits of long-term ownership
- Waste and resource reduction

- Benefits of local production
- Wider distribution of opportunities

- Promotion of local culture, communities and responsible consumption

- Promotion of an aesthetic of sustainability.
- Valorization of personal identity and deeper values



# ART CAR

Creating a prolonged and impactful visible product experience

## PREMIUM

# METAMORPHOSIS

The only constant in life is change, so change with it

The liberation from depending on perfection

PROVOCATIVE

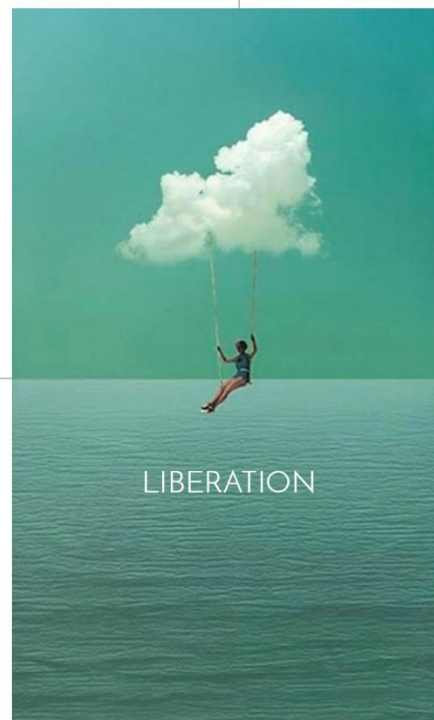


DEVIATION



Personal expression

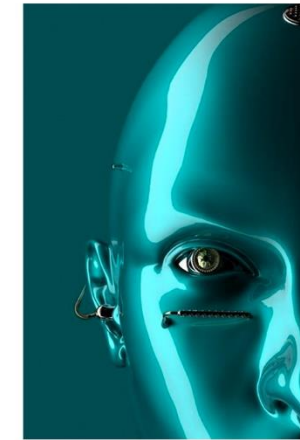
UNORTHODOX



LIBERATION

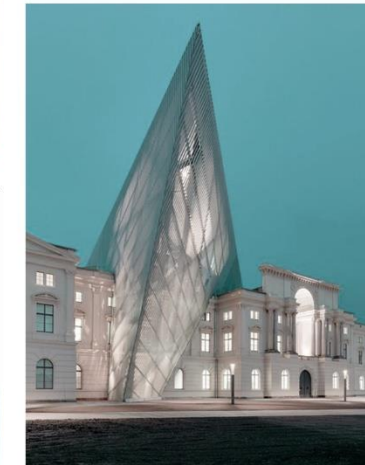
Relinquish the habit of use and discard

EVOLUTION



Making products that are adaptable to change

CHARACTER



GROWTH



## ALTERNATIVE

ETERNALISE



Time visibly marks its presence creating the aesthetic

DO IT YOUR WAY



HONESTY

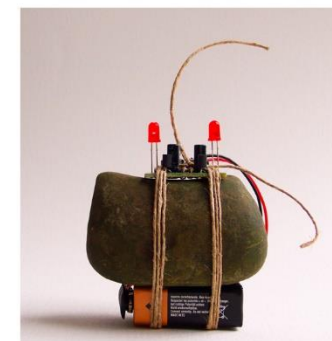


Celebrating additions

REPAIR

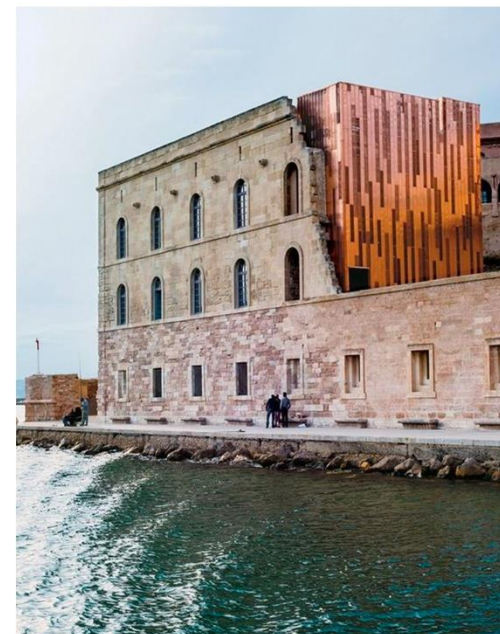


ADAPTATION

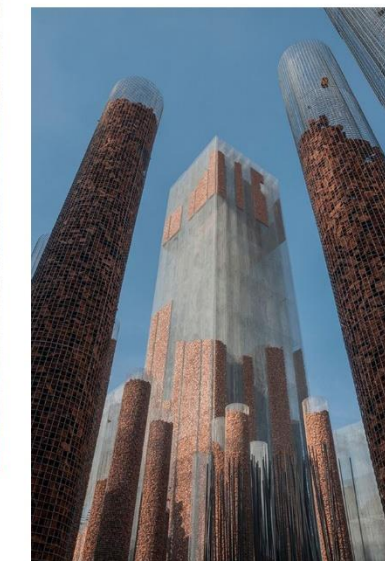


## MAINSTREAM

Letting the new enhance the old



FUSION



CAPTIVATION



# UPCYCLING

Mindful creation that reduces wastefulness

## BUDGET

# SYMBIOSIS

A harmonious co-existence of modern and mature

PREMIUM

# ART CAR

Creating a prolonged and impactful visible product experience

- Vehicles act as a conduit for the ultimate personal expression diversifying society
- Enables responsible and sustainable consumption
- Valorises culture and communities with curiosity and wonder
- Radical aesthetic liberating the dependence on perfection

# METAMORPHOSIS

The only constant in life is change, so change with it

- Donor cars modified to improve performance
- Used vehicles are adaptable to change representing reciprocity and integration
- Evolves to incorporate digital interfaces
- Growth and improvement of old vehicles promoted by creating an aesthetic of advancement

ALTERNATIVE

MAINSTREAM

ECOFITTING

- Reclaimed and natural materials used to upgrade parts of old and worn vehicles
- A celebration of addition giving used vehicles a new lease of life
- Aged parts of the car promote material conservation
- Aesthetic where time visibly marks its presence, adding charm and reducing waste.

- Donor cars feature areas of substitution
- Visually intriguing aesthetic where the old enhances the new
- New materials sit boldly in contrast with the original
- Encourages cross industry partnerships

# UPCYCLING

Mindful creation that reduces wastefulness

# SYMBIOSIS

A harmonious co-existence of modern and mature

BUDGET

DEVIANT

UNORTHODOX

PROVOCATIVE

GROWTH

CHARACTER

EVOLUTION

RE-PURPOSE

ETERNALISE

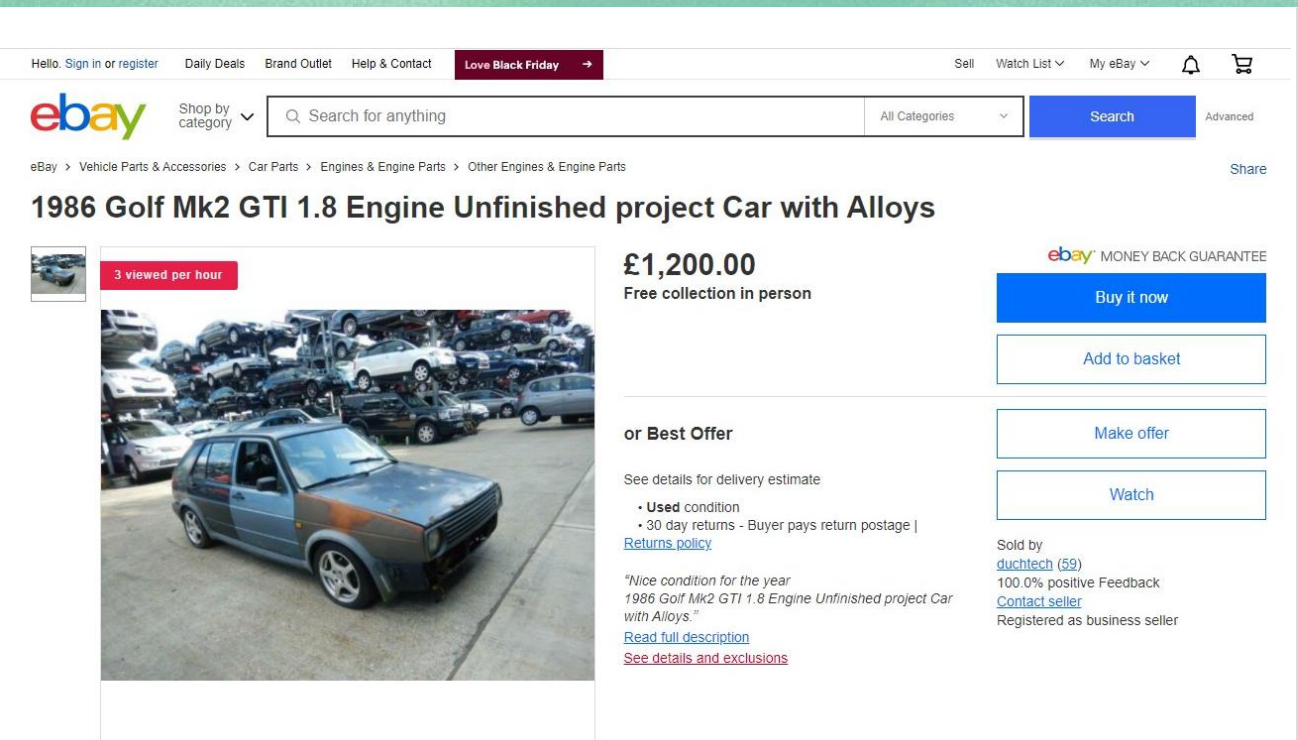
HONESTY

ADAPTATION

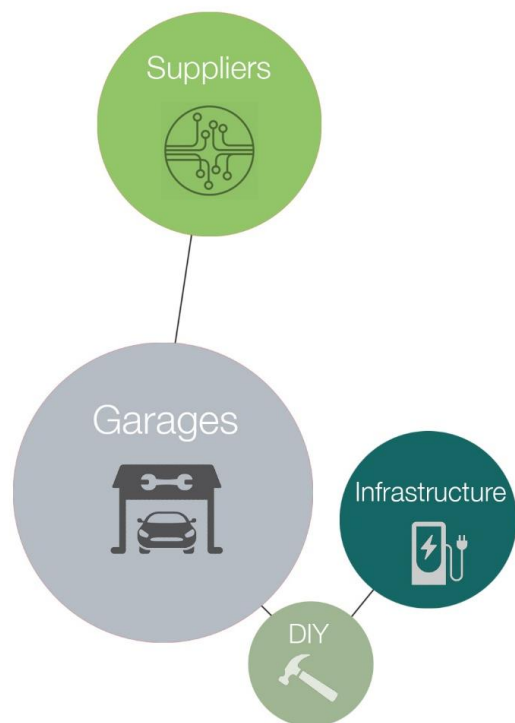
CAPTIVATION

FUSION

# Current Progress



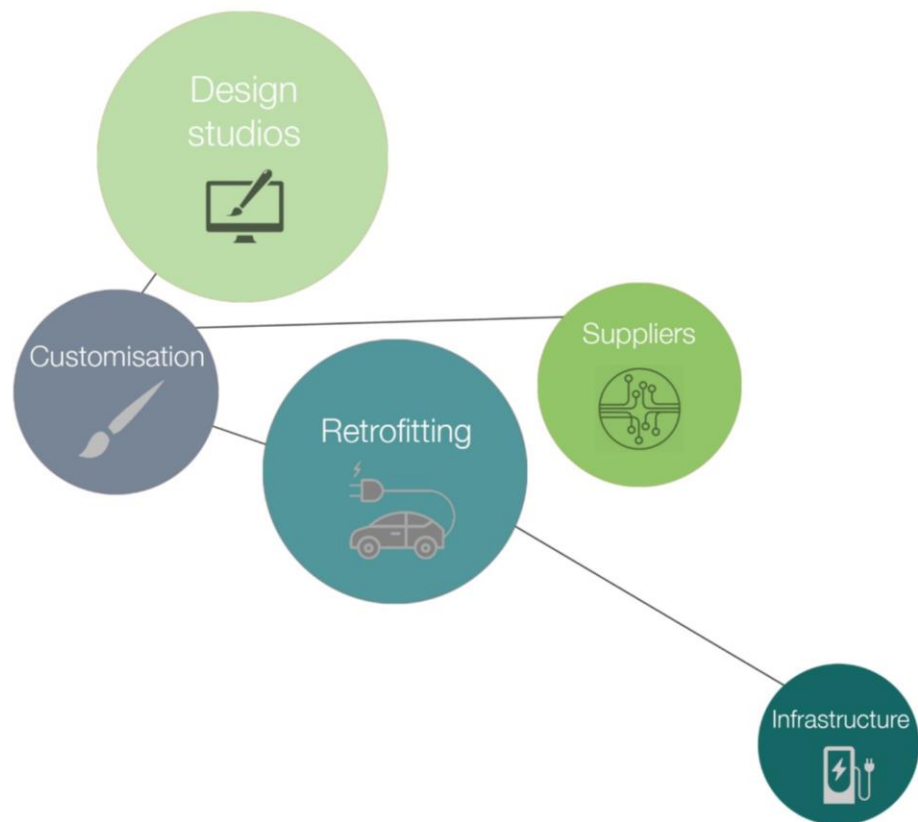
Ecofitting presents an opportunity to explore how sustainability can directly **challenge aesthetic conventions and social norms**, and be an **instrument to climate action**. It must focus on applying natural materials, local craftsmanship and reflect local culture.



# Current Progress

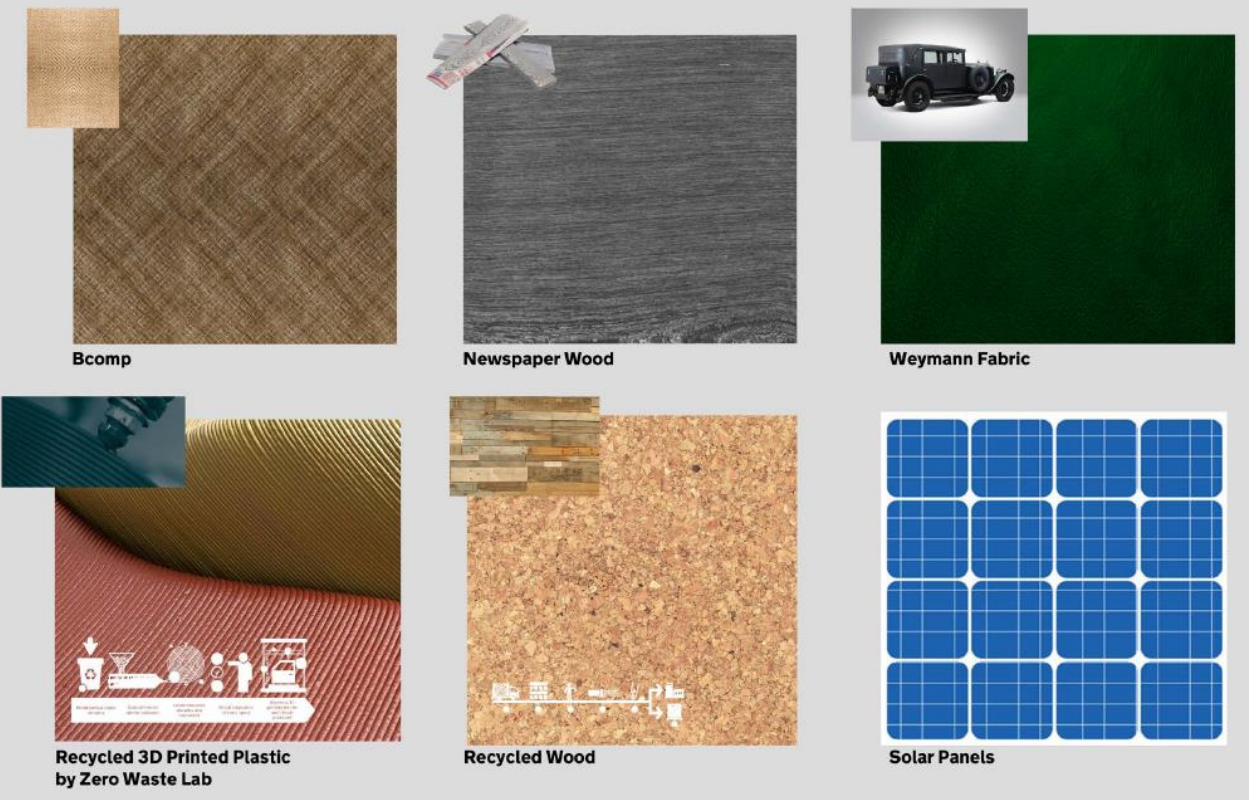


Promoting **long-term ownership** is the **game-changer of Ecofitting**. It will require a shift on how we understand, consume and use cars.

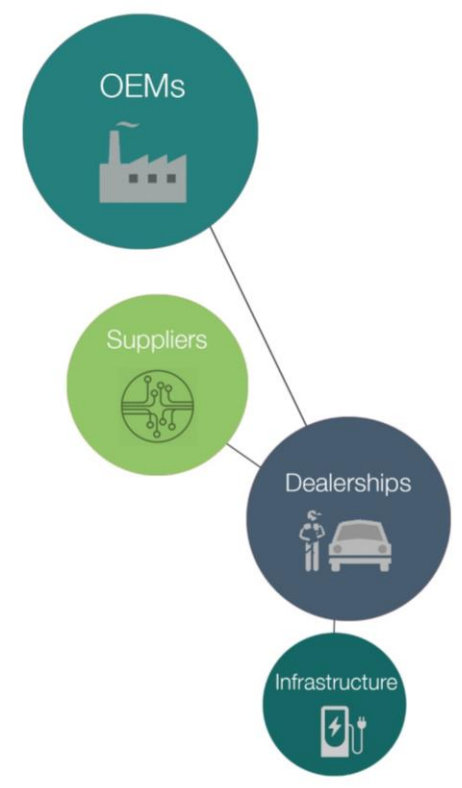




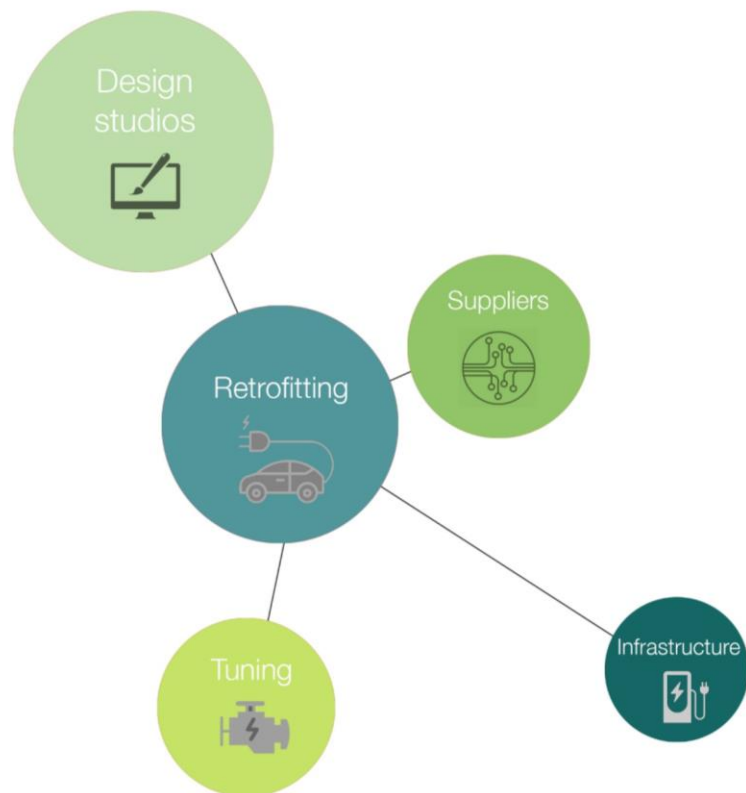
# Current Progress



Ecofitting presents an **additional revenue stream for OEMs with fleets of unsellable cars**. As a new business model, it facilitates the conversion, upgrades and personalisation, helps supporting dealerships and keep and create jobs.



# Current Progress



It will reconfigure the economy around it and **reduce environmental impact in manufacturing, distribution, use and disposal.**

# Next Steps

## Planned research activities

- Ecofitting Physical Demonstrator
- Ecofitting Circular Economy Stakeholders Engagement
- Quadruple Bottom Line of Sustainability Design Toolkit

## Opportunities

- Non-compliant vehicles can be redefined promoting zero emissions mobility
- Develop socially responsible material culture
- Promote **long-term ownership**
- **Changing the way cars are designed**
- **Circularity, in the product level, needs a support platform and evolved culture.**

## Beneficiaries

OEMs, Expanded Supply Chain, Garages, Dealerships, Customizers, Restores, Retrofitters and Design Studios

## Pathways to impact

1. Feasibility Study - Concepts
2. Physical Demonstrator - Prototype
3. Stakeholders Engagement – Partnerships
4. Industry Partners Project – Service
5. Ecofitting Design Platform - Website
6. Policy making – Incentives

## ECOFITTING LANDSCAPE

WHOLE LIFE DESIGN

