

# BMW i VISION CIRCULAR

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# 1. About

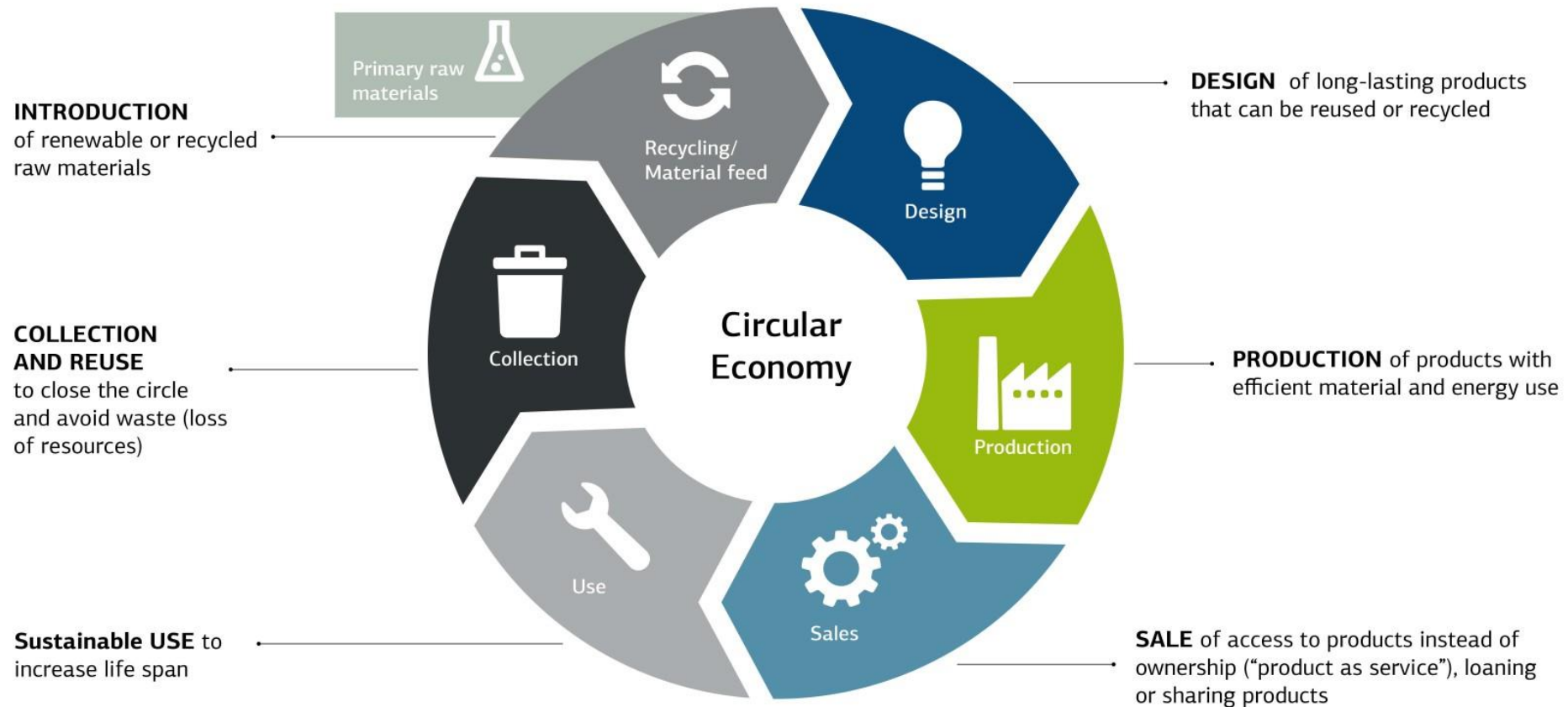
- Built by BMW for IAA 2021 in Munich
- One of 4 concept vehicles
- Full electric drive
- Focused on circular economy
- Design goal was 100% recycled or recyclable materials





# 2. Circular Economy

## »» Value creation cycle in the circular economy







# 3. Promo Film



Introducing the BMW i Vision Circular

Teilen



## Introducing the BMW i Vision Circular

Ansehen auf YouTube

[\[https://youtu.be/WieBN931vos\]](https://youtu.be/WieBN931vos)



# 4. Design Principles

## RE:THINK

- Circular Economy starts with rethinking
- Processes & manufacturing must be questioned
- Every part must be revised, overhauled or if not needed completely removed

## RE:DUCE

- “I do more with less”
- Reduce use of materials, amount of parts & surface finishes (e.g. paint, chrome, ...)
- Reduce ecologic footprint of materials
- Reduce complexity of user interfaces

## RE:USE

- Extend lifetime of the car
- OTA-Updates & “Option as a service” bring new experiences & continuous improvement
- Reuse of materials through refurbishment
- Connections must be easily removable

## RE:CYCLE

- “Secondary First” – use recycled material
- Recycle material at end of lifecycle
- Material separation must be easy
- No use of composite materials





# 5. Exterior



- Interior space maximized
  - ▶ Less space usage in cities
- Anodized aluminum instead of paint
  - ▶ Easier to recycle

- Inspired by BMW i3
- Purist
- Use of different materials minimized





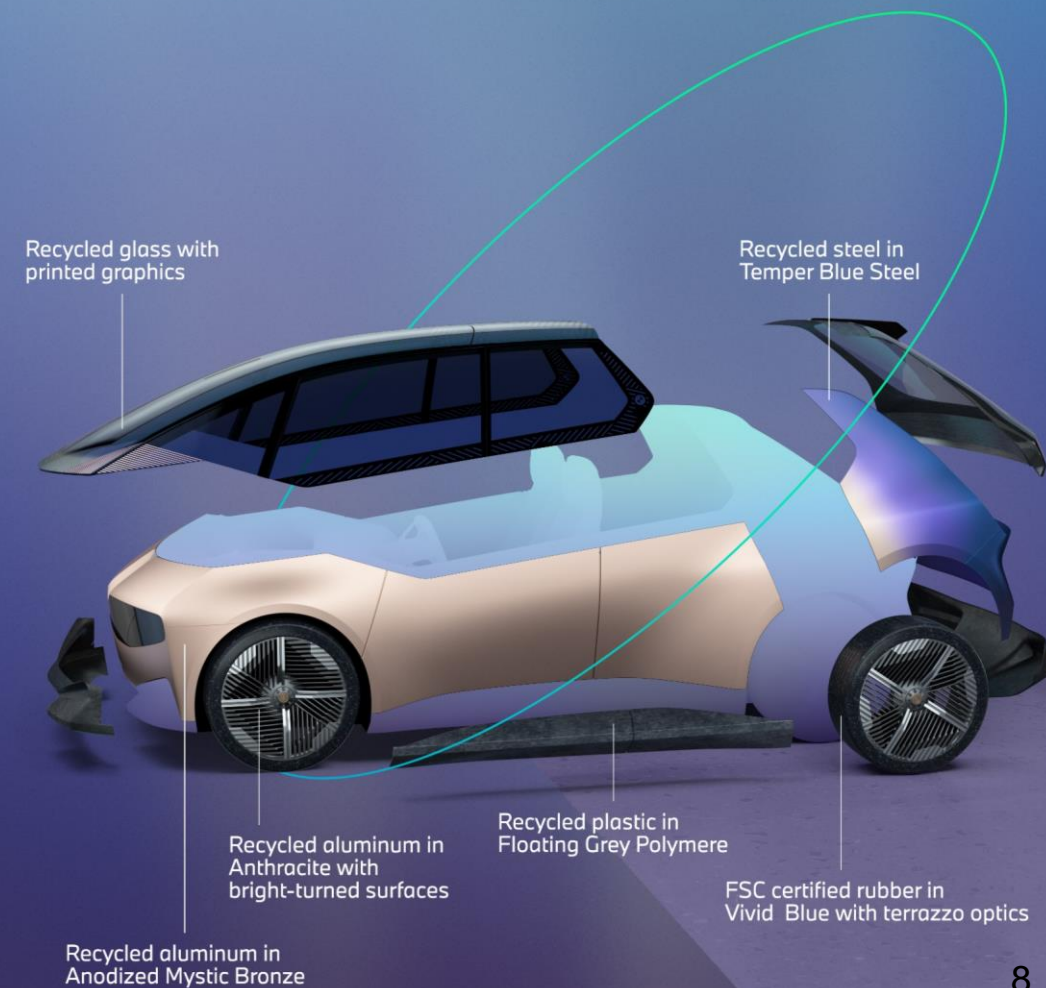
# 5. Exterior

- Characteristic radiator grill replaced with smart light concept
- Engraved logo for reduced material use
- Tires made from natural rubber
- Rims combine minimal material use and maximal brake cooling



## SUSTAINABILITY AND MODERN AESTHETICS.

The exterior of the BMW i Vision Circular consists of nearly 100 % recycled monomaterials such as aluminum, steel, plastic and glass. The intrinsic behavior of the materials and gentle surface finishing create an engaging aesthetic of sustainability. The high-quality materials can be returned directly to the material cycle with little effort.







# 6. Interior

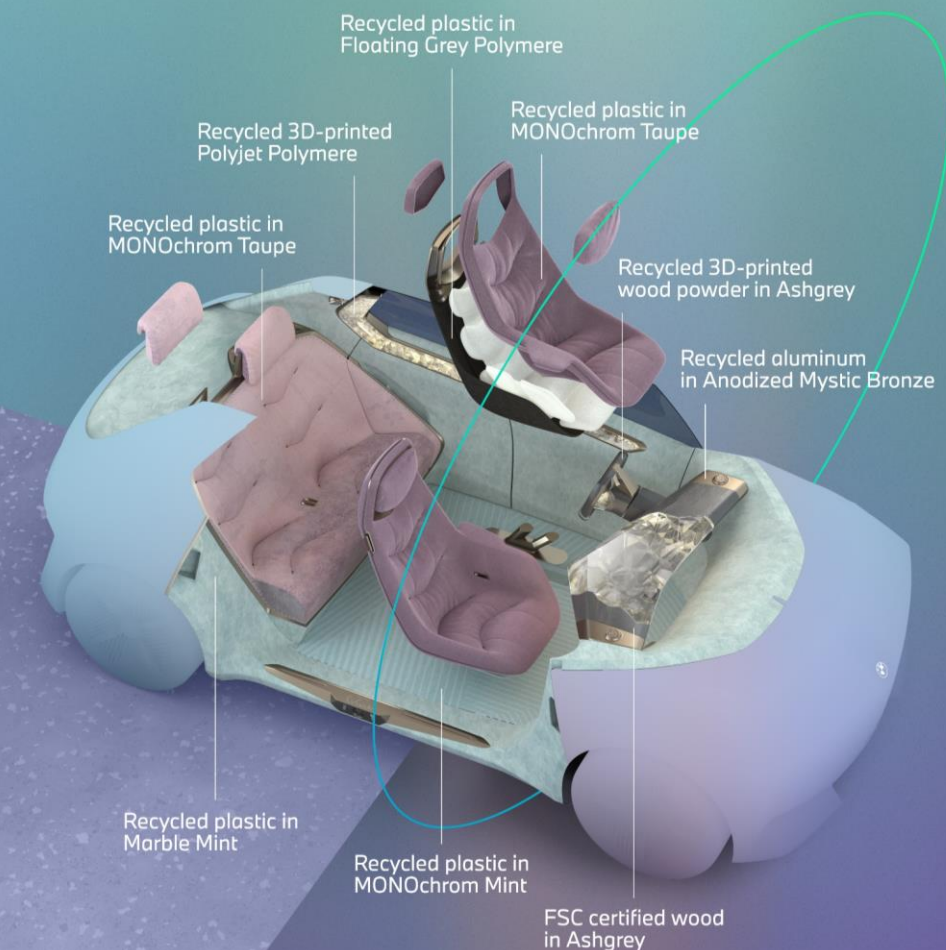
- Elimination of center console and seats on aluminum posts free up space
- Made of recycled plastic, aluminum, polymer & wood



- Parts are connected with knobs & cords
- No glued / composite materials

## LUXURIOUS, AESTHETIC AND 100 % REUSABLE.

The BMW i Vision Circular offers a luxurious interior experience on a small mobile footprint. Monomaterials, i.e. pure materials and no composites, are the basis of closed material cycles. Therefore, the high-quality interior is made of materials that have already been recycled and can later be 100 % reused.





# 6. Interior



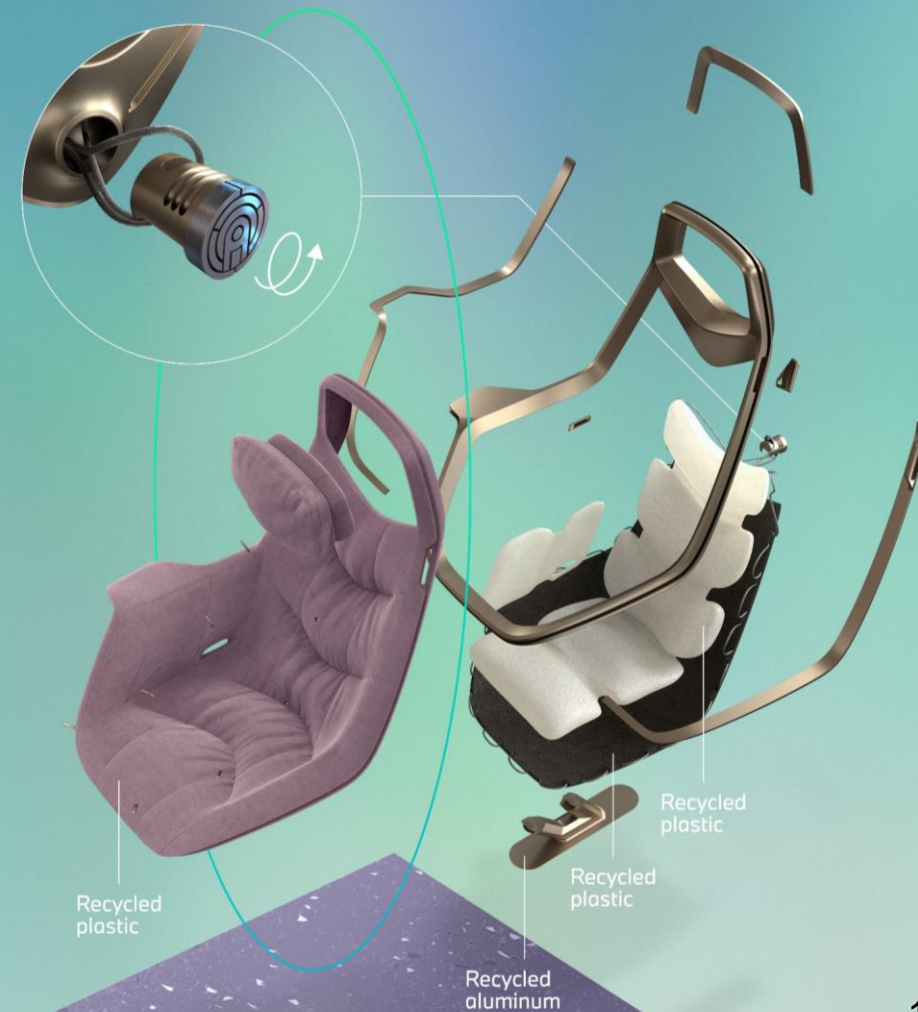
- All Information displayed on large HUD (Head Up Display)
- “phygital experience”
- 3D-printed body with sensors for user input
- Light effects react & adapt
- Removal of buttons makes recycling easier





- CIRCULARITY WITH CLEVER SOLUTIONS.

The BMW i Vision Circular features a future-proof seating concept that uses only a few materials. The upholstery is made of recycled plastic which rests in an anodised aluminum frame. The back of the slim front seat shell is made of recycled plastic in a terrazzo look. There is a quick-release fastener for disassembly, allowing for metal and textile to be easily separated and reused according to type.

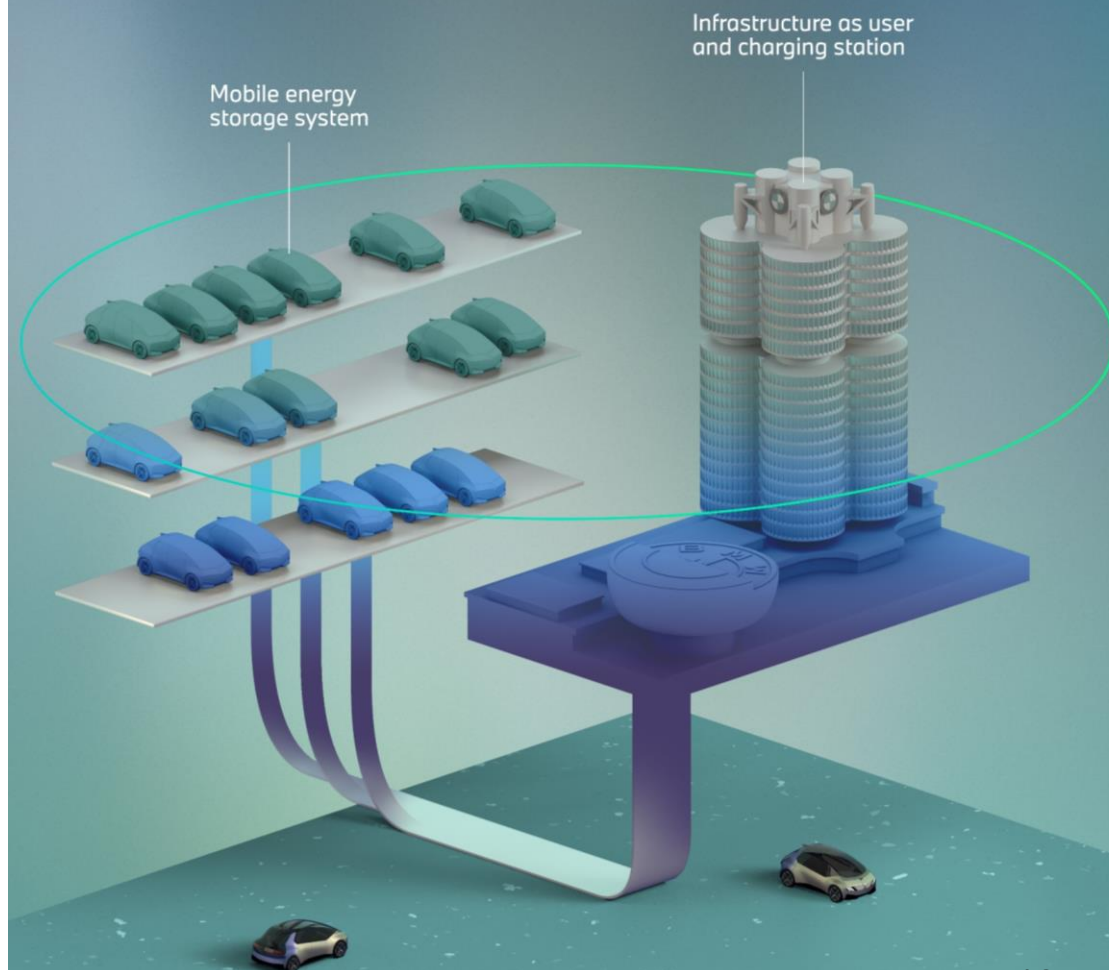




# 8. Vehicle to Grid

- Bidirectional charging capabilities
- Stored electric energy can be fed back to grid
- Large scale solutions can be used to stabilize the grid
- Private households can store solar power to be less dependent from grid
- Mobile Power Supply

**MOBILITY GUARANTEE AND FUTURE-PROOF ENERGY MANAGEMENT.**  
The all-electric design study BMW i Vision Circular offers the option of bidirectional charging. The vehicle feeds electricity into the energy grid to balance out consumption peaks. It becomes a mobile electricity storage unit and can be charged in reverse via buildings and infrastructure.







# 9. Critique

- Focused on design, technical aspects neglected
- Vision Circular shows path towards Circular Economy
- Demonstrates that a sustainable car is possible
- Often neglected for economical reasons
- Secondary use of materials gets more common, already often used for seats
- Vehicle2Grid: Hyundai, KIA & Nissan leading the market





# Sources

- (1) <https://www.press.bmwgroup.com/deutschland/article/detail/T0341253DE/der-bmw-i-vision-circular>
- (2) <https://www.electrive.net/2021/09/06/bmw-i-vision-circular-wie-ein-bmw-i3-im-jahr-2040-aussieht/>
- (3) <https://www.ad-magazin.de/artikel/iaa-muenchen-bmw-i-vision-circular-kreislaufwirtschaft>
- (4) <https://www.kfw.de/stories/environment/natural-resources/circular-economy-infographic/>

## Images

- (1) Main source (all images without specific reference):  
<https://www.press.bmwgroup.com/deutschland/article/detail/T0341253DE/der-bmw-i-vision-circular>
- (2) <https://www.autobild.de/artikel/tops-und-flops-iaa-2021-meinung-20533785.html>
- (3) <https://insideevs.de/news/530550/bmw-vision-amby-pedelec-tempomodi/>
- (4) <https://www.kfw.de/stories/environment/natural-resources/circular-economy-infographic/>
- (5) <https://press.kia.com/eu/en/home/media-resouces/press-releases/2021/The-all-new-Kia-EV6-offers-an-outstanding-level-of-usability.html>