



**AWK'23**

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# #Framework for Circular Production Economy

## Empower Green Production

Keynote – Session 4  
Prof. Dr.-Ing. Dipl.-Wirt. Ing.  
Günther Schuh

# The potential of e-mobility was inaccurately assessed as its ecological potential actually lies in the modularity enabled by the drive system

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Carriage-architecture



Combustion-architecture



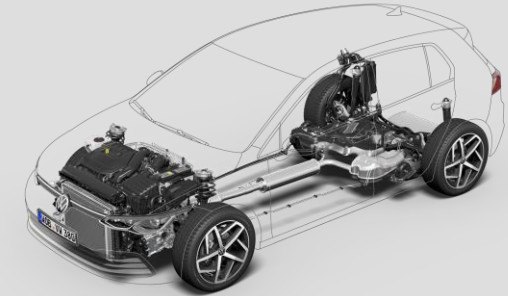
Automotive-architecture



Electric-architecture

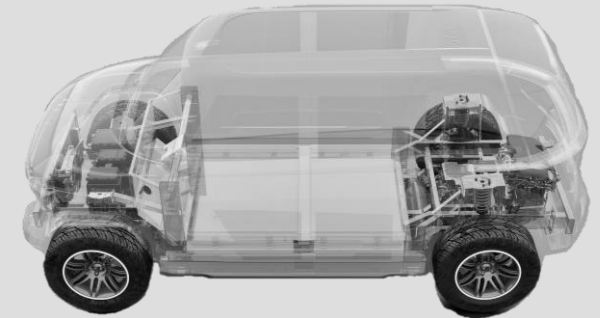
Source: Volkswagen AG, e.Volution Gmbh, Mercedes –Benz Group

## Rediscovery of the chassis as a module



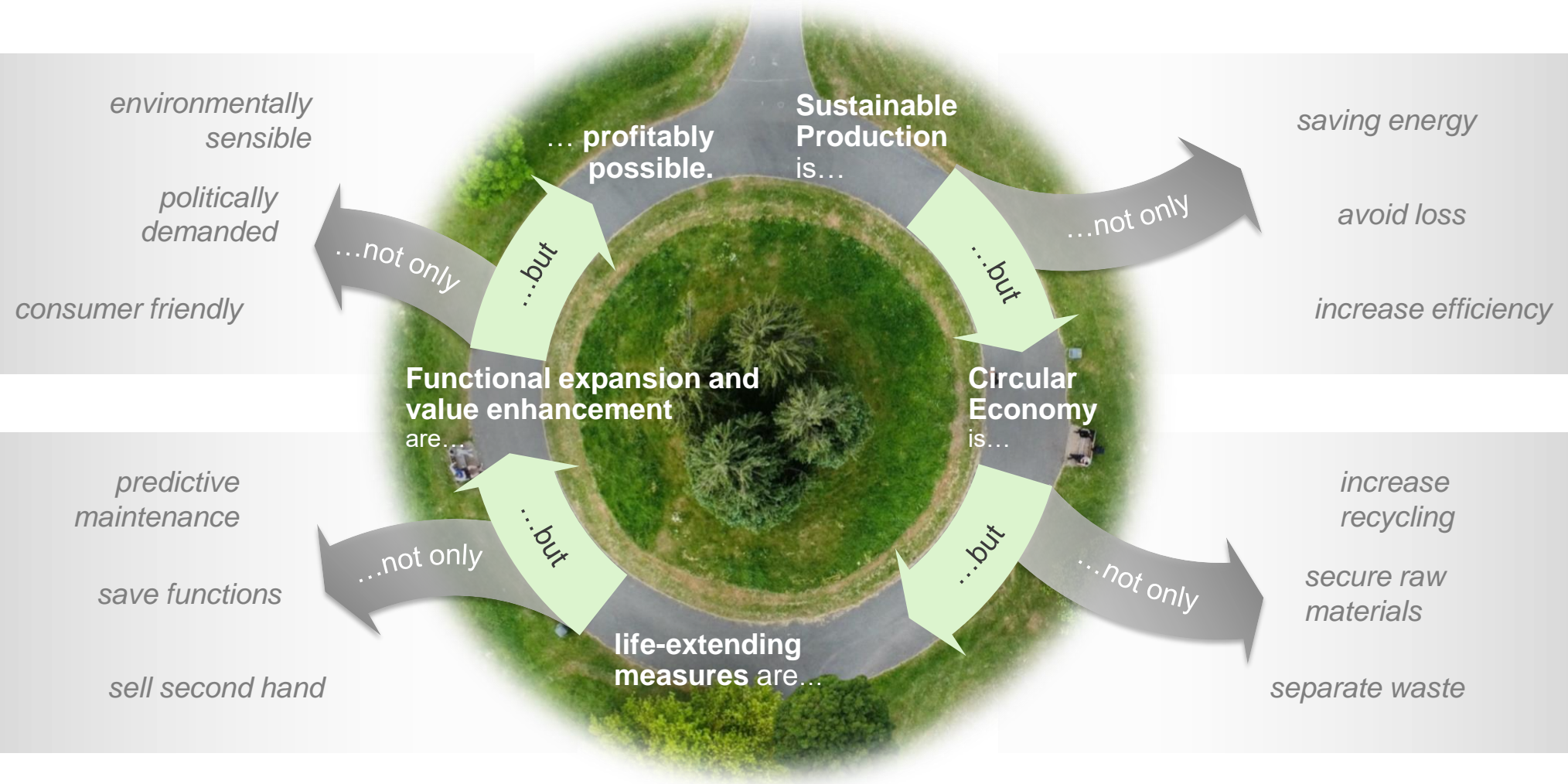
**+20-30 %**  
Value creation  
of the OEM

**-50 %**  
Material and  
environmental impact



# Sustainable production has the greatest potential when a function- and value-enhancing Circular Economy is installed

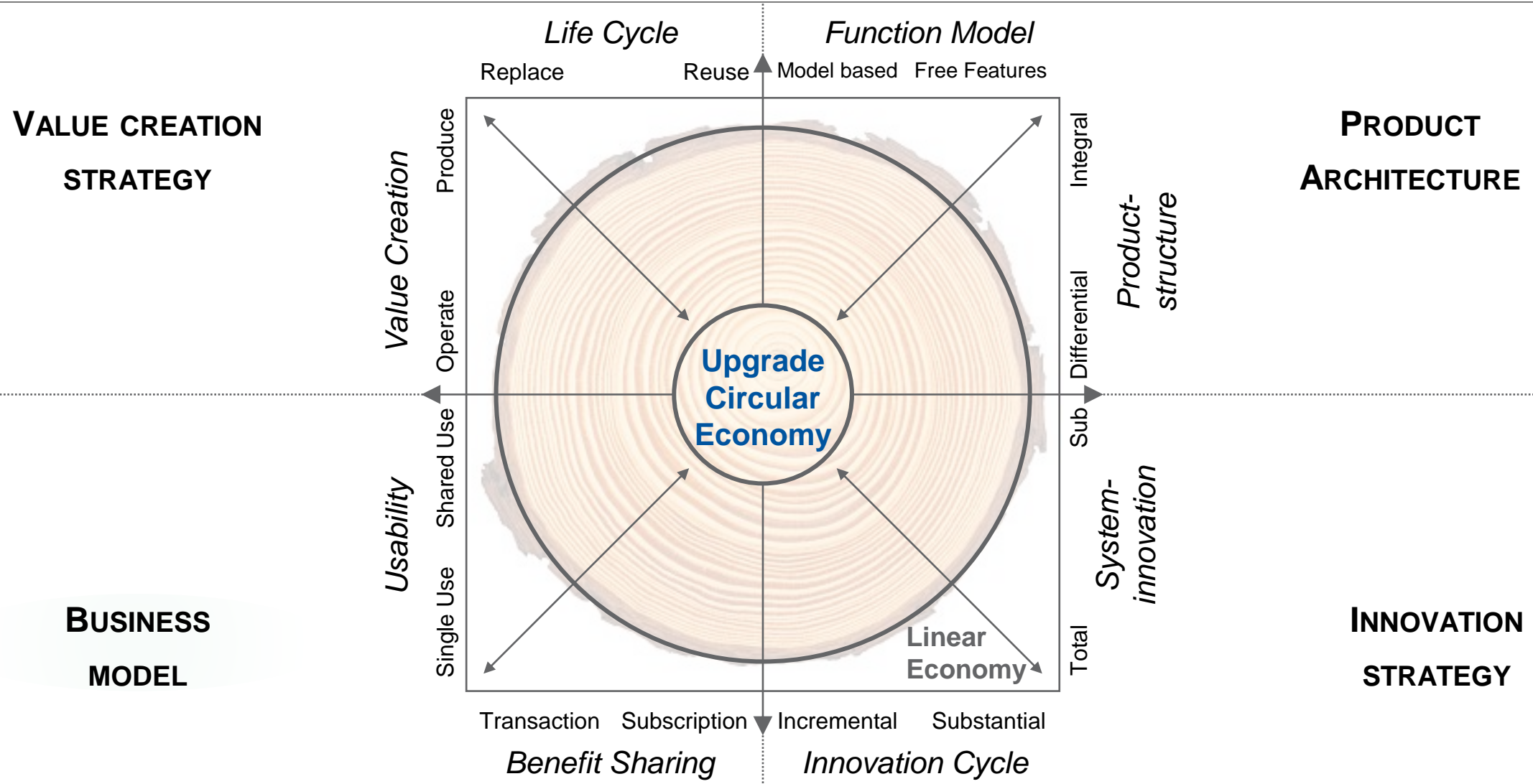
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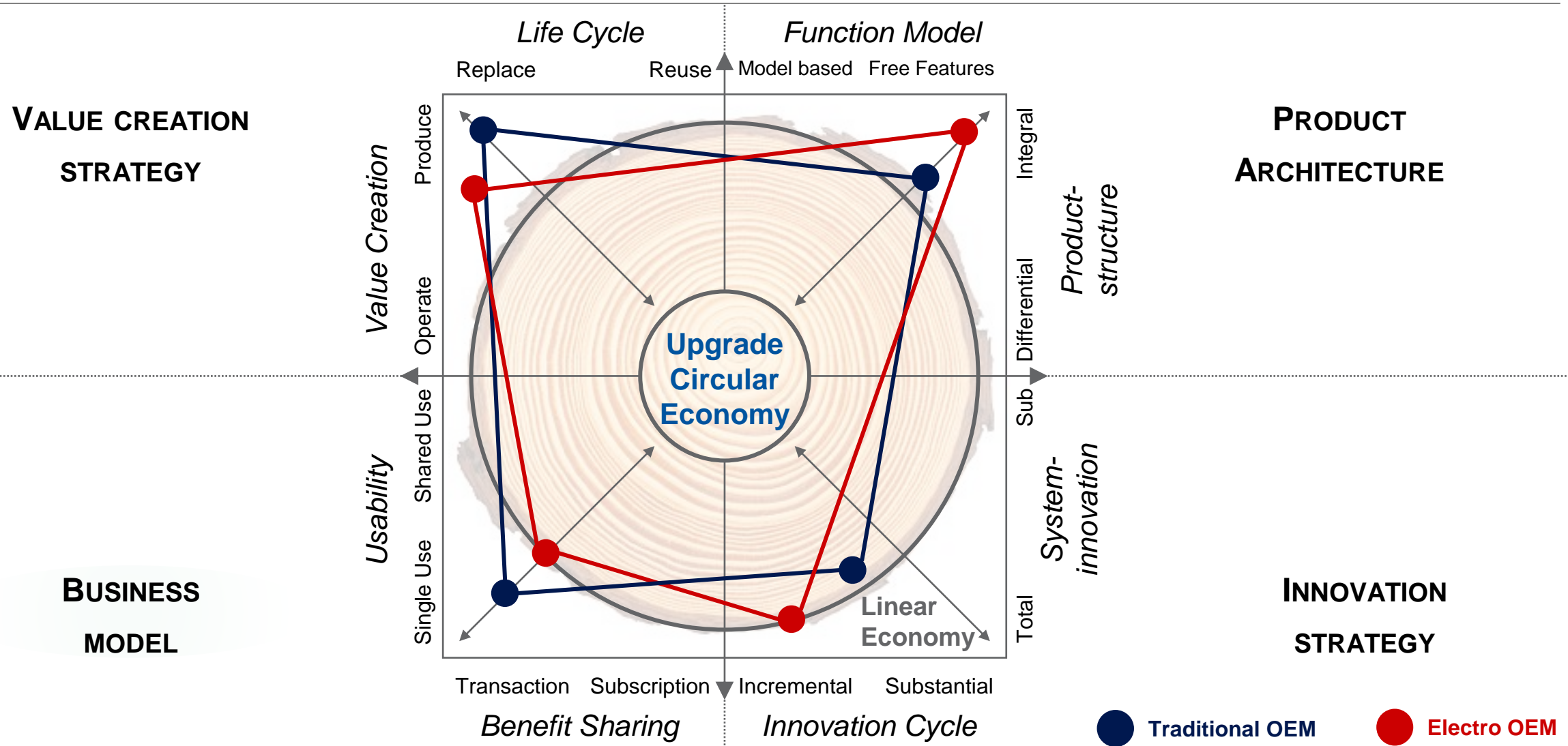


# The Framework for the Circular Production Economy shows how the transformation to the value-enhancing circular economy can succeed

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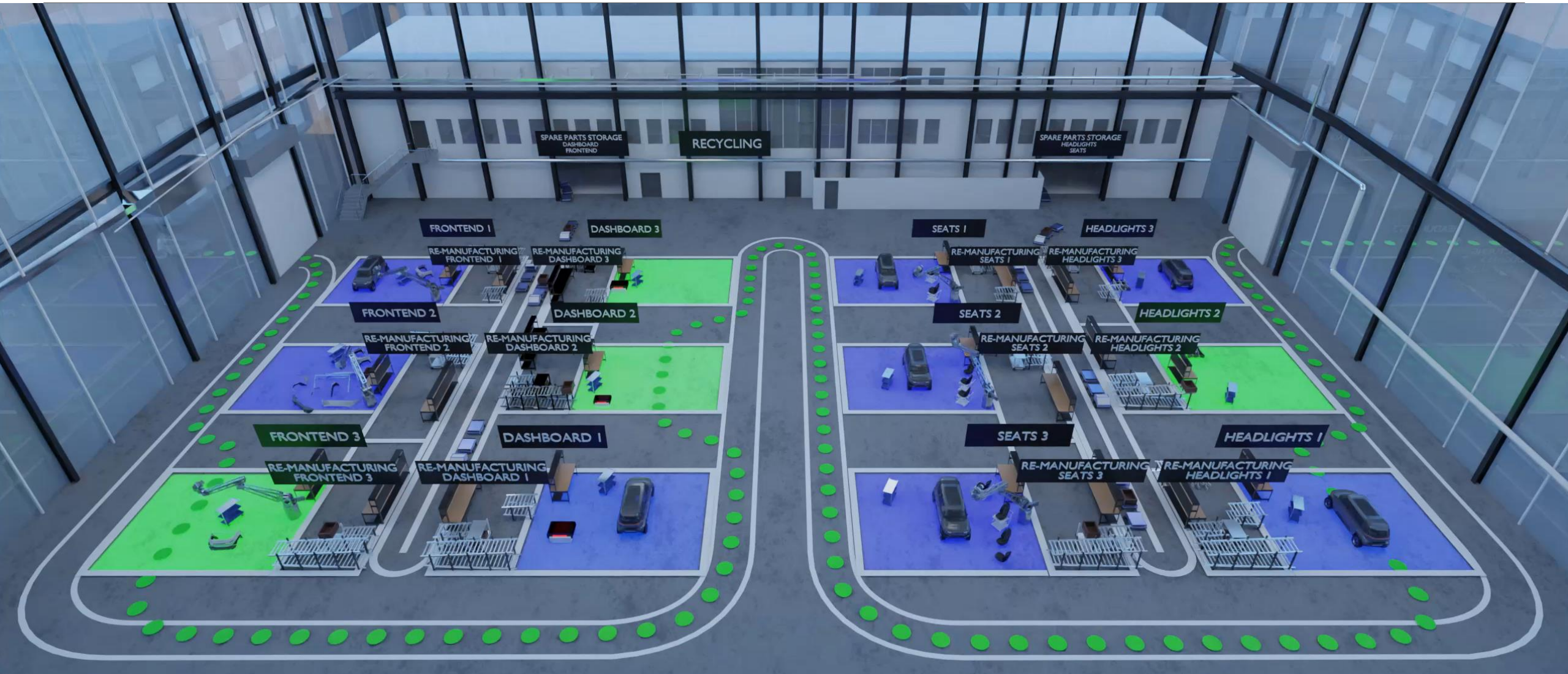
# The Framework for the Circular Production Economy illustrates the differences in the strategies of various vehicle manufacturers





# The Re-Assembly factory enables the combination of operation and reuse for the right value creation strategy

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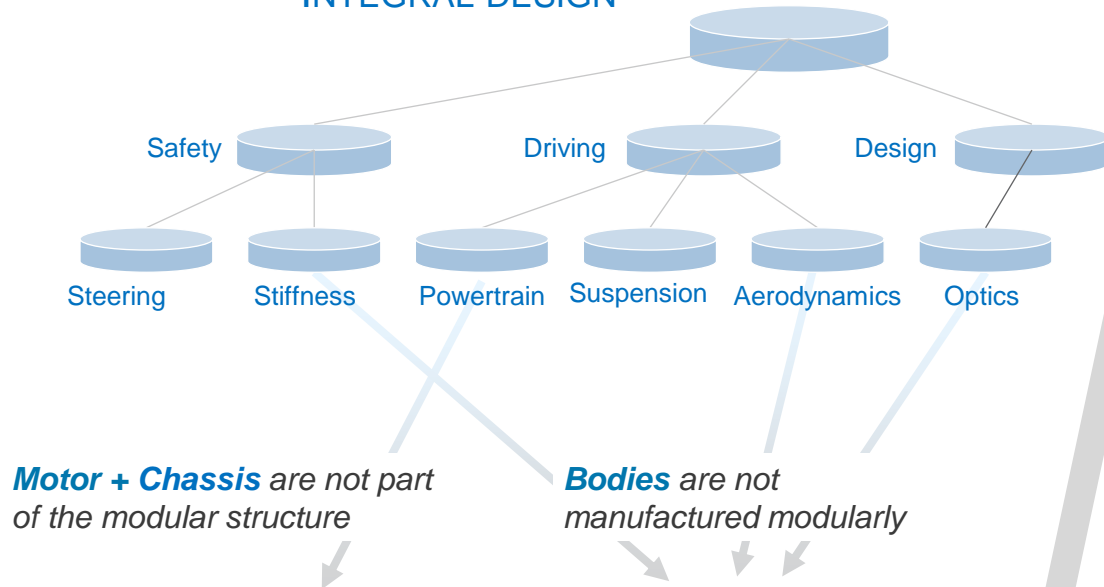


# The new product modularity synchronizes component functions and technical life cycle by means of function separation

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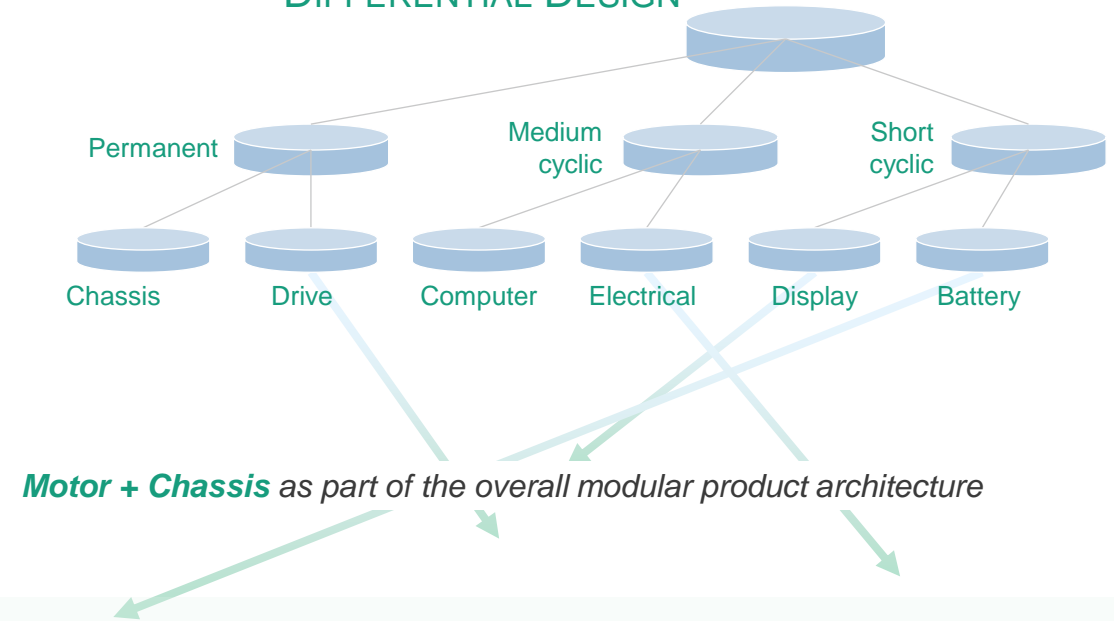
## PRODUCT STRUCTURE TODAY

### INTEGRAL DESIGN



## PRODUCT STRUCTURE TOMORROW

### DIFFERENTIAL DESIGN



Source: GKN Automotive, Mahle Group, ElringKlinger AG, e.Volution GmbH



# Enable the function-enhancing Circular Economy through an incremental innovation strategy in upgrades and updates

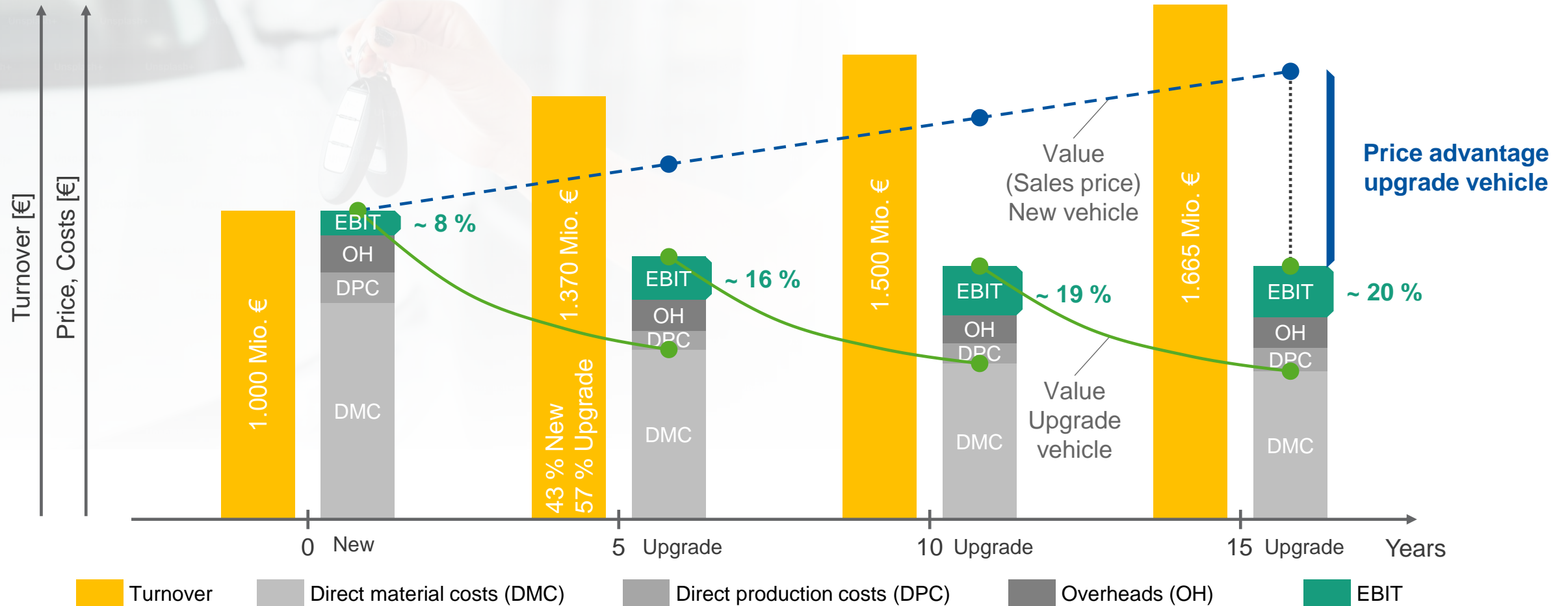
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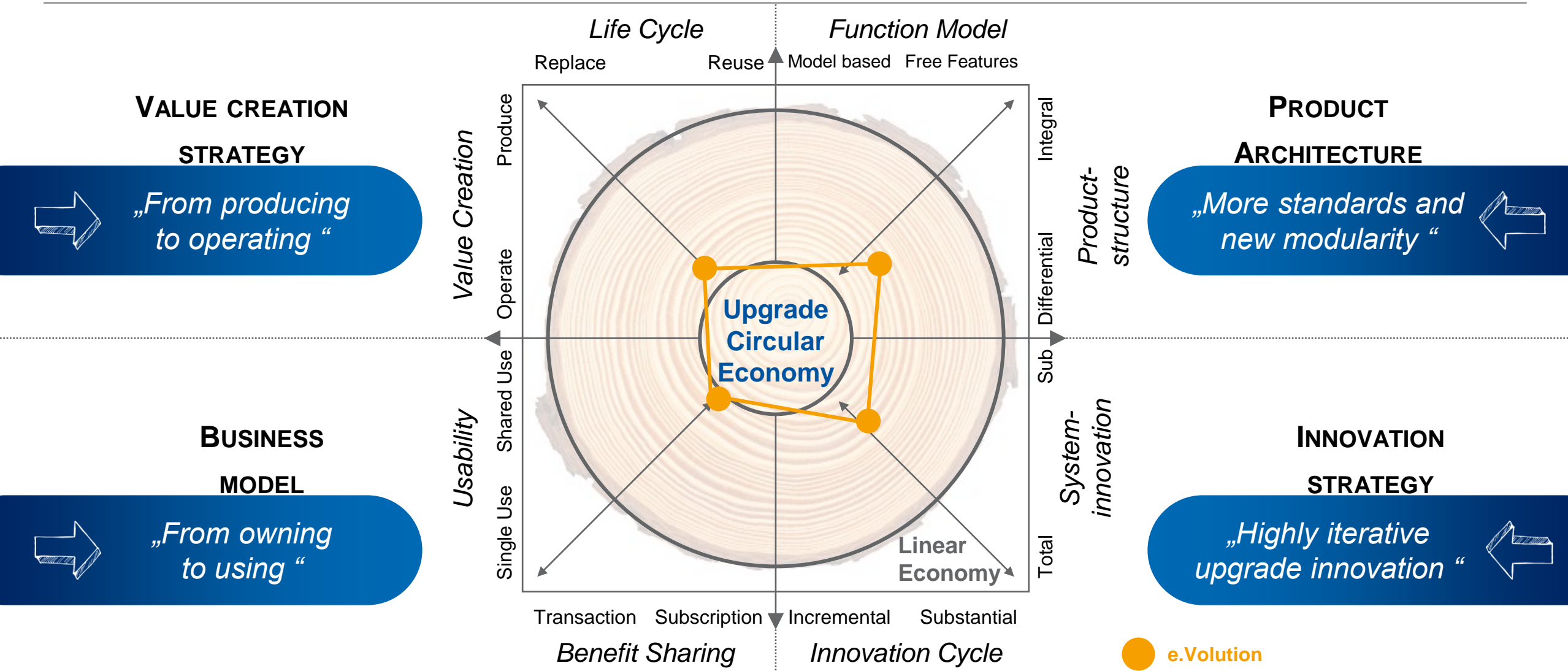
# The hat trick of value-enhancing Circular Economy – half the environmental impact, cheaper to use, more margin

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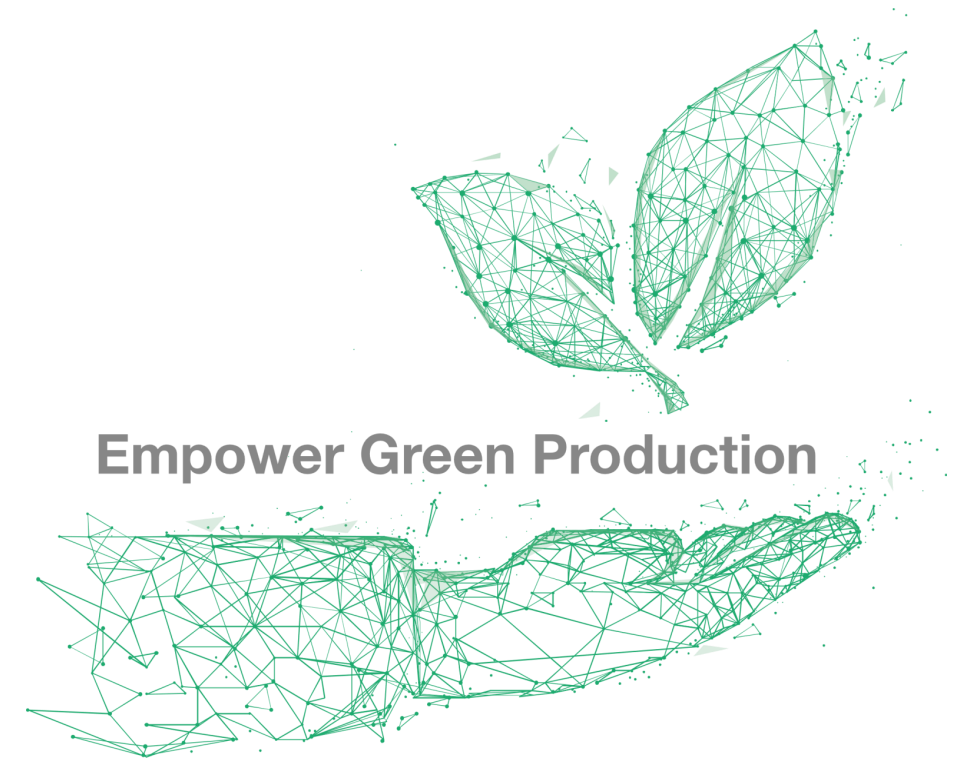


# The paradigms of the value-added circular economy are followed by e.Volution in all aspects of the framework

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# Thank you for your attention!



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