



**Observatoire Europe-Afrique 2030**

**"Value Chain" sheet**

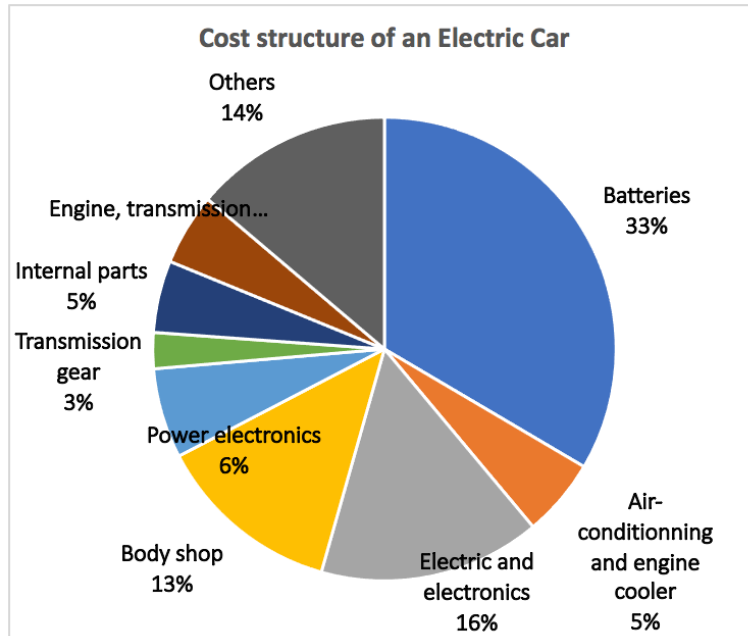
**Fact sheet n°6**

**Electric Vehicle**

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# 1. Cost structure of an electric vehicle

The three main cost items for an electric vehicle are batteries, electronics and body and structural parts. They account for 62% of the total cost of the vehicle.



"Other" includes suspension, braking, passenger protection systems, audio and telematics, steering system, wheels and tires, and glazing.

## Three subsystems account for 45% of the content of an electric vehicle:

The battery pack (€8,000), including:• Module and cells• Battery pack• BMS (Battery Management System)

Power electronics (€1,500), including: e-drive/inverter (DC/AC)• DC/DC converter• OBC On-board charger (AC/DC)The electric motor

"eTransmission" (gearbox and shaft) ( €1,120).

# 2. Cost comparison between an electric vehicle and a combustion engine vehicle

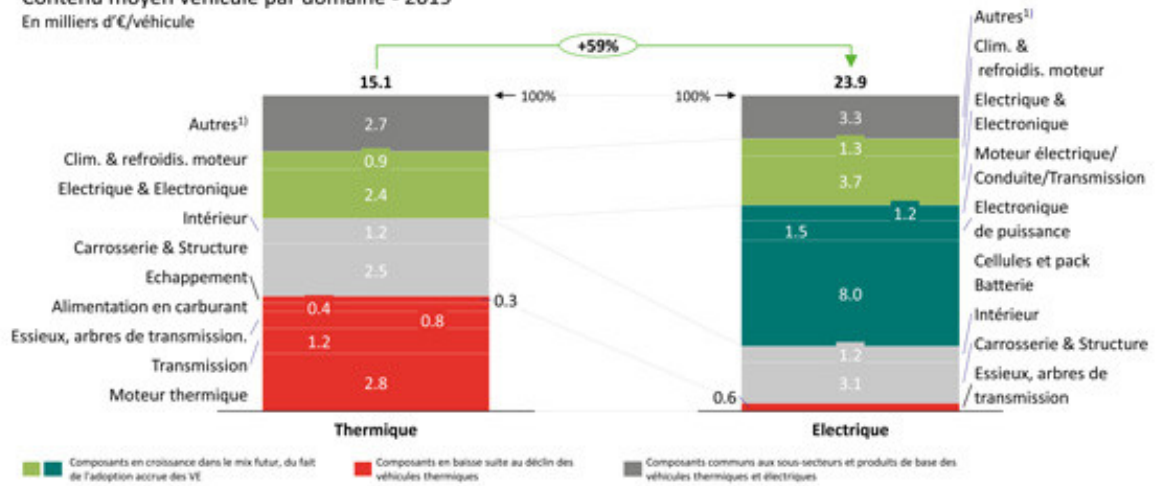
The cost of components in an electric vehicle is on average 59% higher than that of a combustion engine vehicle (€23,900 compared to €15,100).

Main cost items of an internal combustion vehicle:

- €2,800: combustion engine
- €2,500: bodywork and structure
- €2,400: electronics
- €1,200: interior parts
- €1,200: transmission
- €2,700: other (suspension, braking, passenger protection systems, audio and telematics, steering, wheels and tyres, glazing)

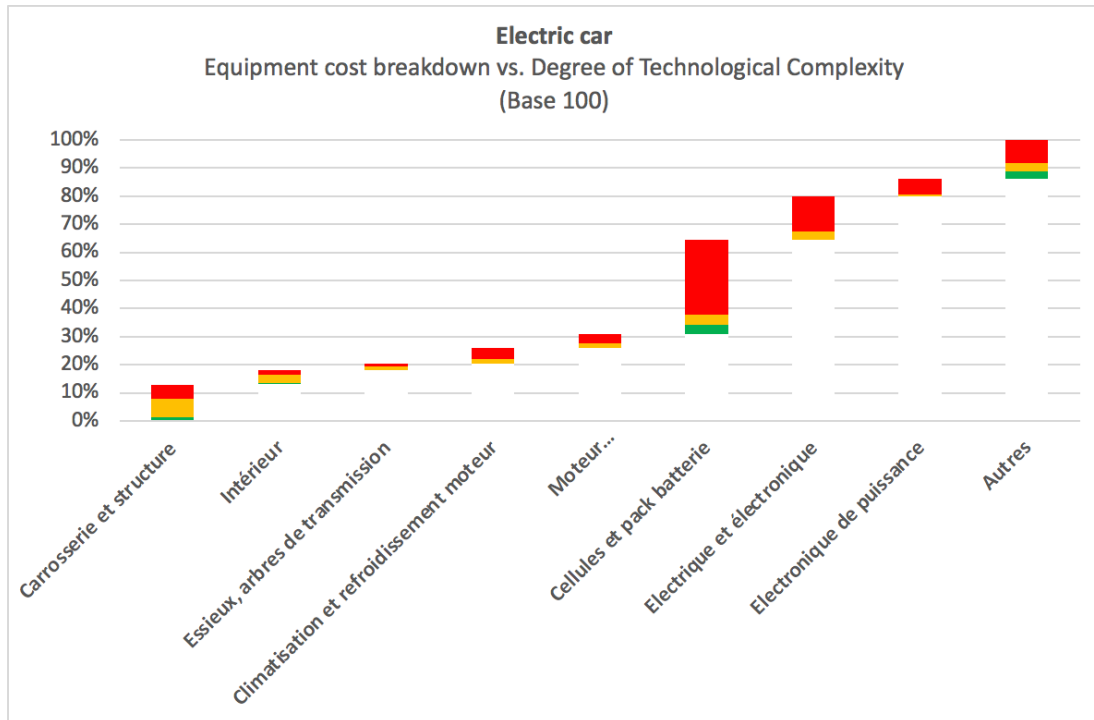
**24.000 € vs 15.000 € : le coût des composants d'un véhicule électrique est en moyenne 59% plus élevé**

Contenu moyen véhicule par domaine - 2019  
En milliers d'€/véhicule

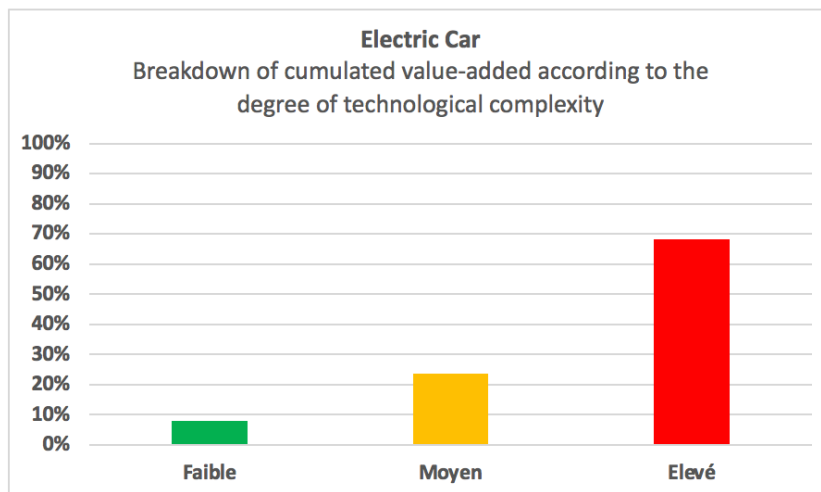


Source : Recherche et Analyse AlixPartners | voir disclaimer pages 21 et 22  
 1) Comprend la suspension, le freinage, les systèmes de protection des passagers, l'audio et la télématique, la direction, les roues et pneus, le vitrage

### 3. Value Chain



*Source: Europe-Africa Observatory 2030. These data were estimated from bibliographic surveys. They are orders of magnitude.*



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## 4. Sources of information

- PFA study "Impact of the energy transition of the European "Fit for 55" plan for the French automotive industry" - December 2021:

<https://www.latribuneauto.com/reportages/economie/12653-le-cout-des-composants-dun-vehicule-electrique-significativement-plus-eleve>

- Research & Analysis AlixPartners :

<https://www.largus.fr/pros/actualite-automobile/voiture-electrique-quel-impact-pour-lindustrie-automobile-en-2030-10801394.html>