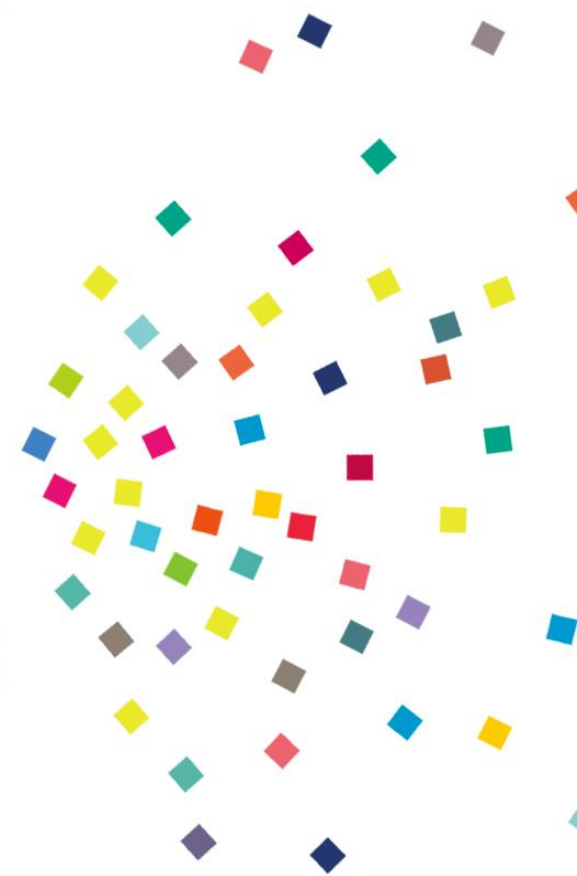


Presentation

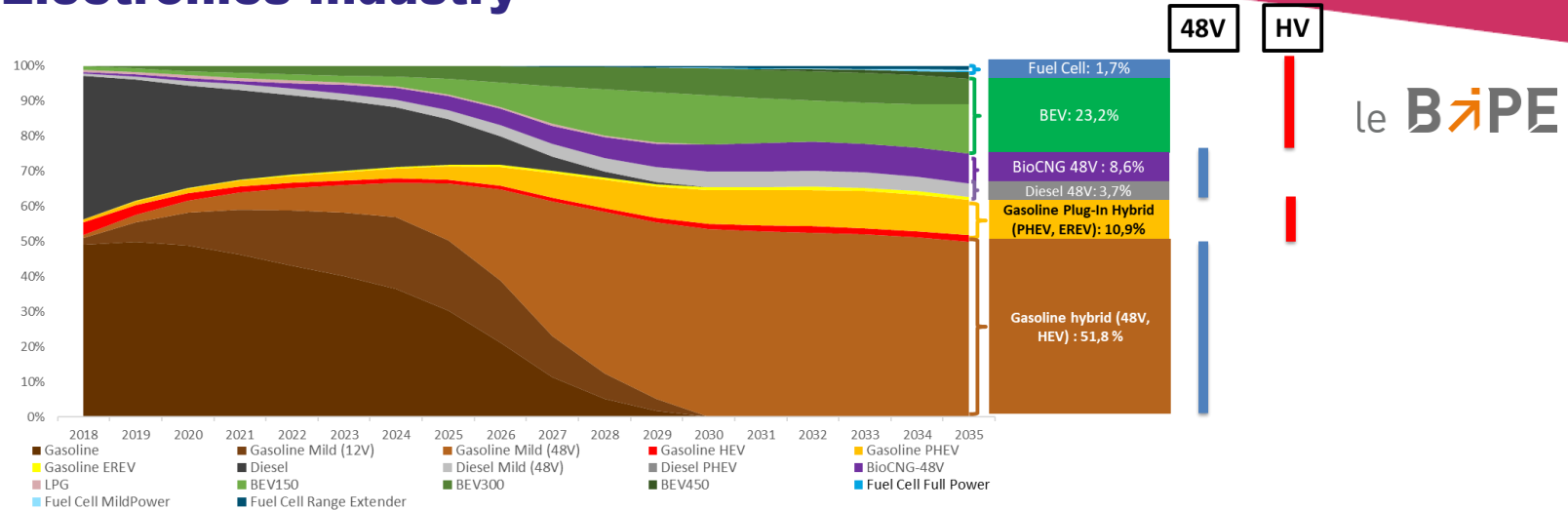


collaboration is the driver



Electrified vehicles(xEV*):
In Europe, 100% of the market electrified
by 2030

Power Electronics → A major stake for Automotive and Electronics Industry



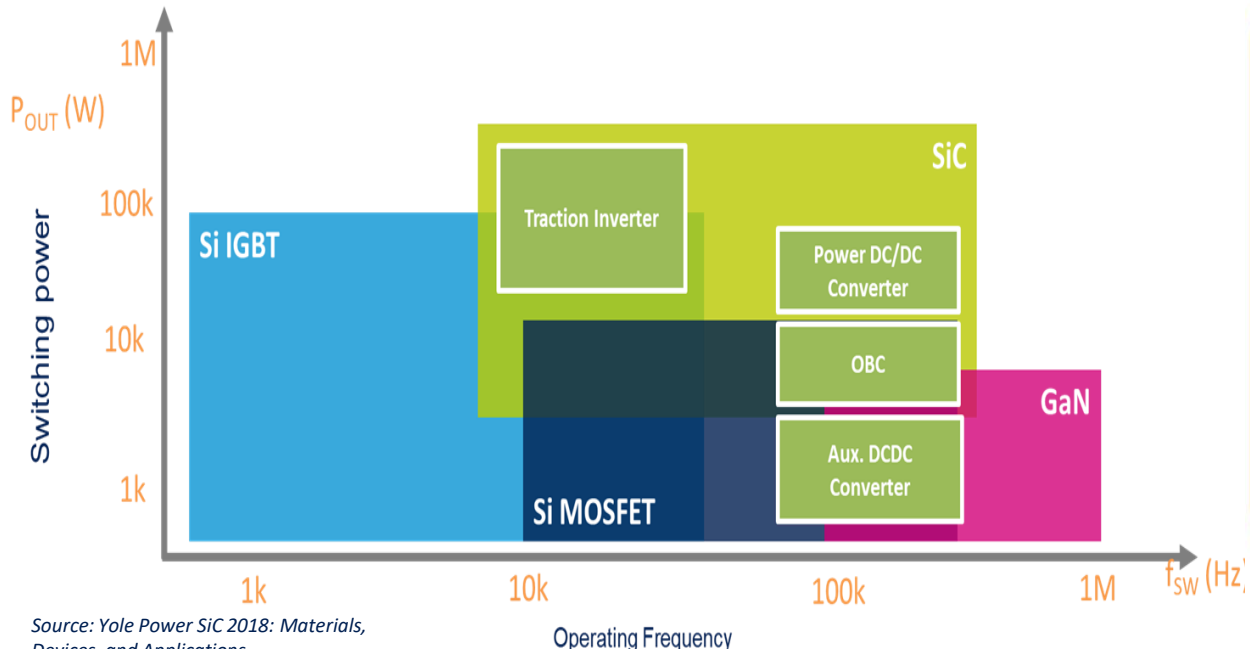
By 2030,

- 100% of the market with inverter and DC/DC. The 48V market-share up to 60%.
- 1/3 of the market will have an OBC high voltage. Voltage in the range of 400/800V

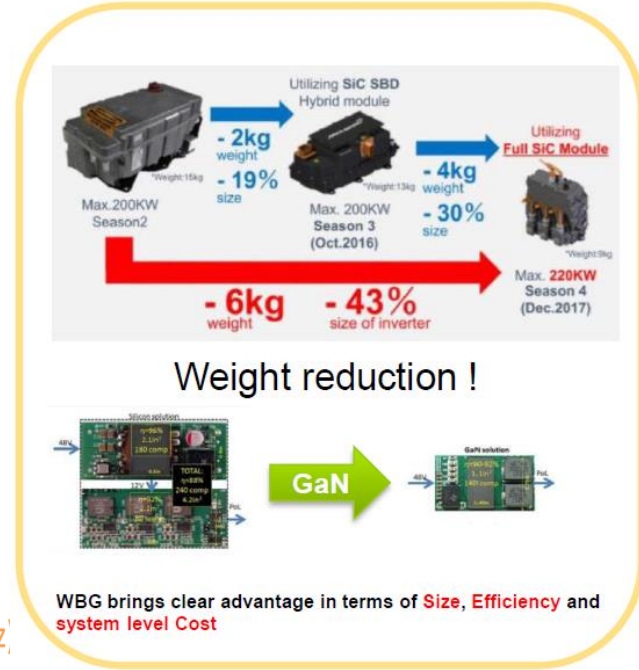
* xEV : mild hybrid (mHEV), full hybrid (HEV), plug-in hybrid (PHEV), Battery electric vehicle (BEV).

Source : PFA

Power electronics will live a technologic revolution, the « wide band gap », SiC & GaN, will disrupt Silicon(IGBT&MOSFET)...



Source: Yole Power SiC 2018: Materials, Devices, and Applications



A key factor for the Automotive Industry
competitiveness...

	Power electronics Average value per car(€)	European market	Europe TO (B€)
2020	110 €	13%	1.6 B€
2030	670 €	100%	10.5 B€

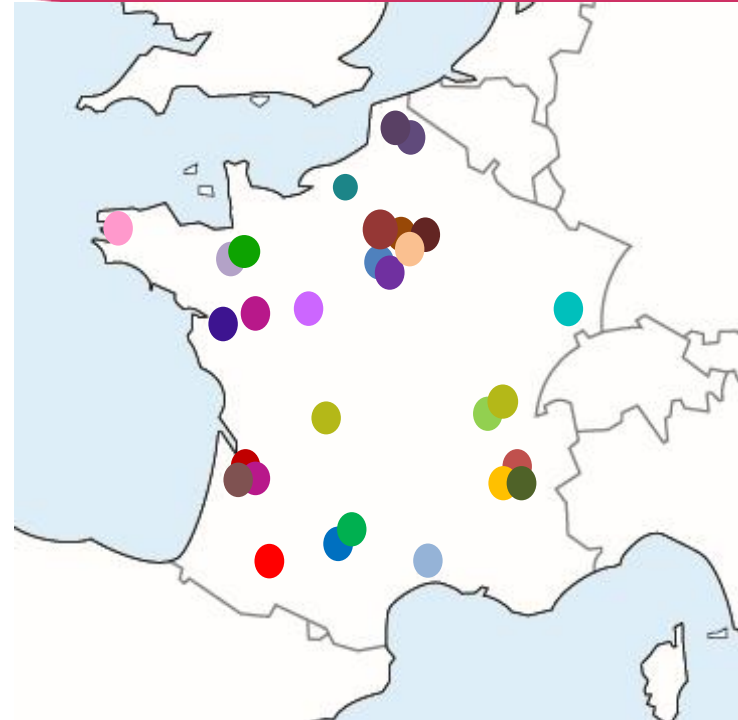
The cost of power electronics represents :

- 80% à 110% of the cost of a gasoline engine for BEV

France owns strong Industrial and Research assets



 **23 Plants**
24 R&D
centers



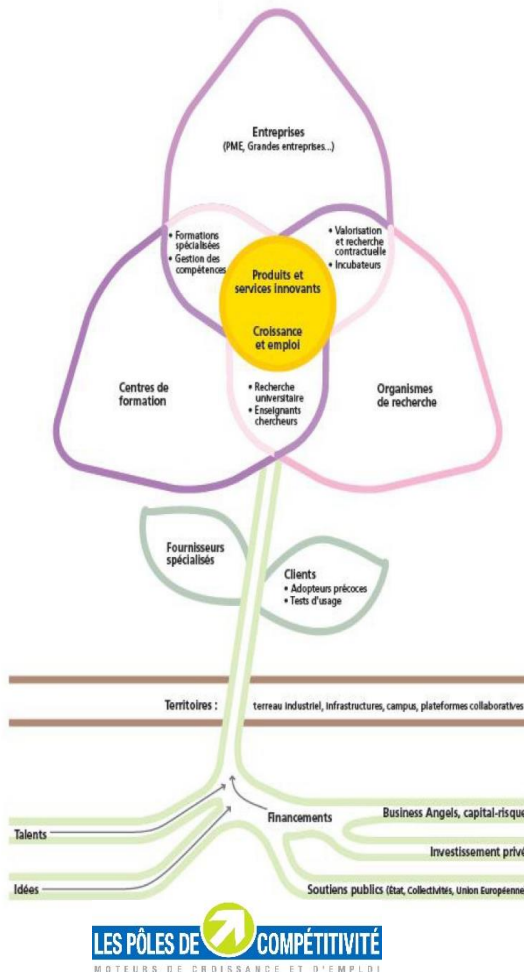
 **35 Research labs**
>800 researchers

- Power electronics is a **structuring field of value** (between 300 and 1000€ per car)
 - ➔ it is **mandatory to be excellent** on that systems
- Industry is in strong mutation: **sales x 7 and will face a technological mutation with Wide Band Gap by 2030**
 - ➔ that was and is still the **right time to move on**
- **France owns excellent assets** (industry leaders, research laboratories) already **mobilized**.



Electronics and Automotive Industry councils decided to launch a National Program to localize Power Electronics in France with the help of french competitiveness clusters and in particular NextMove in order to coordinate the operational activities

What role for NextMove in this transformation ?



Our mission is

- To support innovation and promote collaborative R&D projects.
- To bring together companies, large and small, research laboratories, training institutions and communities

We have 4 working axis :

- Animate the French network
- Challenge the technological potential of our members
- Find fundings for their projects (national and European)
- Find partners and customers

A network of +550 members



INDUSTRIAL & MAJOR GROUPS



+200 MID-SIZE, SMES & INNOVATIVE STARTUPS



RESEARCH CENTERS, LABS & ACADEMICS



LOCAL AUTHORITIES & TERRITORIES



next move
collaboration in the driver

The ambition of the program is to reach excellence

➤ **Product excellence :**

- To achieve >30% in compacity
- To achieve >3 points in efficiency
- To simplify the systems : convection cooling for instance
- To Realize the best value/cost ratio on the market

➤ **Process excellence :**

- Modular and standardized conception to minimize the entry tickets
- Competitive manufacturing processes in France (high level of automation)
- Irreproachable quality
- Optimal life cycle to minimize the environmental impact

**The ambition is to have all the reasons to localize in France and contribute to a strong European industry covering these 10.5B€
This represents > 20000 jobs (R&D+Plants automotive only*) in EU**

- **Around 30 national projects**
- **5 IPCEI leaded by French companies in the field of power electronics (details will be announced on October the 3rd) → several hundred companies involved and several hundred millions € of funding**
- **1 KDT project on reliability of power electronics : 50 partners (15 in France) and 50M€ of funding**
- **Consolidation of research plans of the French labs to maximize synergies and fast market introduction.**
- **Several networking activities, webinars / techshows, etc... Next event will be held in 10 days**

Thank you for your attention

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collaboration is the driver

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