

Preface

Electro mobility is a general global trend, since it corresponds to converging expectations regarding the environment and society at the same time as institutions, communities and companies undergo a digital transformation. Electric vehicles will be connected vehicles, once again due to the increasingly clear convergence between information and energy networks, opening the way towards shared objectives of autonomy, reliability and security.

It is already obvious that the new generation of electric vehicles cannot be devised, designed and manufactured in the same way as conventional electrified vehicles, not least because the current revolution in terms of how we perceive vehicles and their new uses requires a totally new approach to electric vehicles' architecture, structure, modularity and operation and their interactions with the outside world, until they gradually become autonomous.

At the same time, carmakers are facing rapid technological change, especially in terms of equipment, energy storage, broadband communications and artificial intelligence, sometimes within time frames that are much shorter than the duration of a project. As a result, they have to design upgradeable electric cars capable of easily integrating new physical and software technologies. Innovation therefore becomes crucial to compete with other carmakers, as well as with "new entrants" from the domain of information technology.

It goes without saying that for traditional carmakers, which have nevertheless experienced one or several industrial revolutions including the arrival of robots in their factories, the current revolution is totally different. This is partly because it calls into question the actual purpose of their production as well as their positioning in mobility value chains, where services are likely to increasingly represent a larger share than products.

New economic models for electro mobility are emerging; major changes are taking place in the car industry, with a rising proportion of mobility service activities. What will the car of the future be like? Hybrid, intelligent, autonomous, driverless, but without doubt a shared car for user communities whose primary requirements are time, security and travel comfort. Can the autonomous car meet all of these challenges? Clearly, carmakers will need to outsource information and

communication activities to increase their companies' in-house flexibility and agility. This is because it is vital to create the conditions for fostering collective intelligence and to form a learning/unlearning hotbed to stimulate innovation. For traditional carmakers, the future will involve a mobility revolution combined with a cultural revolution of the entire automotive industry. However, carmakers should retain their own, clearly defined identity as they set out to tackle these new challenges.

In my view, the work presented in this publication makes a pertinent contribution to the debate and thinking process behind the current revolution.

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