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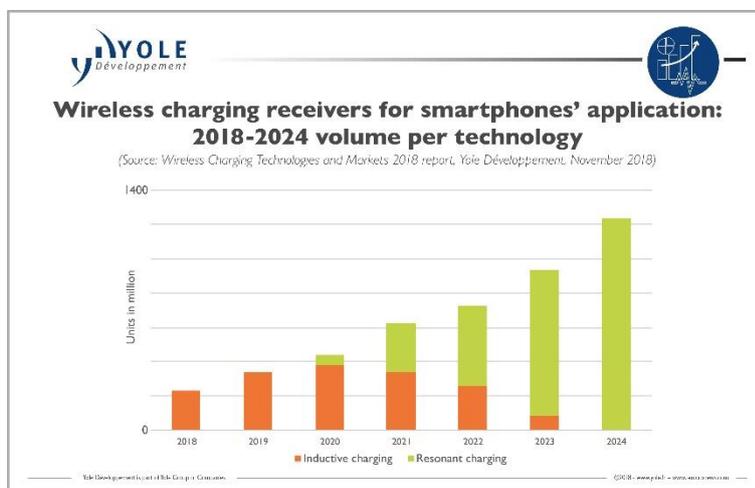
# Wireless charging: a formidable boost coming from the smartphones industry

Extracted from: Wireless Charging Technologies and Markets 2018 report, Yole Développement

**LYON, France – December 20, 2018:** “The way consumers charge their smart devices is about to drastically change,” asserts **Antoine Bonnabel, Technology & Market Analyst and part of the Yole Développement’s Power & Wireless team.** According to the [Wireless Charging Technologies and Markets 2018 report](#), the wireless smartphone charging systems market is expected to surpass 1 Billion units per year by 2024.

In this new technology & market report, the market research and strategy consulting company Yole Développement (Yole) focuses on consumer and mobility market differentiators, as well as industrial, medical, and military markets where separate differentiators are important. The company analyzes the ecosystem and details the competitive landscape in the future of wireless power transfer and wireless charging. In addition, 2018-2024 market forecasts are provided for each market segment, along with estimates for the requisite wireless charging components. Moreover, Yole offers a deep analysis of the physical and technological concepts of inductive and resonant charging, and explores the physics and technologies behind their defining elements.

How to become a billion units market? What are the market drivers? What are the main wireless charging technologies? ... The Power & Wireless team from Yole proposes you a comprehensive understanding of the wireless charging technologies and markets.



Wireless charging has seen substantial industry interest over the past several years, from its association with smartphones to its integration in Starbucks coffee shops. However, the market for wireless charging will remain highly uneven and consumer-oriented. “As an example, consumer charging is expected to surpass 1.2 billion receivers in phones by 2024,” comments Antoine Bonnabel from Yole. “In

*parallel, wireless charging for EV/HEV<sup>1</sup> will not see a similar market acceptance before 2022, and only then as an option for high-end cars.”*

The general consumer market’s need for wireless charging is very recent, and linked to the prevalence of consumer electronics such as smartphones, earphones, smartwatches, etc. These devices require frequent charging, which “surrounds” the user with power cables. Because it is still an “early” market need, consumer wireless charging could have been a slow technology push. However, adoption happened faster than expected thanks to a very peculiar market situation: technology integrators crave new differentiators, and wireless charging is a perfect example.

In the smartphone industry, as well as in consumer services and the automotive market, a slightly interesting capability can become a strong differentiator with tremendous financial repercussions. For instance, when a new set of emojis is enough to motivate a new smartphone purchase, the possibility of wirelessly charging the phone in a coffee shop can have the exact same effect.

Technology developers and integrators have combined forces to push wireless charging implementation, not just creating a new market but also educating it very quickly. Wireless transmitters can now be found in furniture, airport terminals, and restaurants, while mats able to recharge multiple devices from the comfort of one’s home are in development. In light of these innovations, the general electronics industry is motivated to move towards wireless charging-compliant solutions. Down the road, what is today a hypothetical could become the standard, with phone manufacturers like Apple bringing “cordfree” devices to the mass market.

In other mass markets, wireless charging’s presence is definitely the product of a “technology push” approach. This is especially true for electric vehicles, where wireless charging will in the mid-term be limited to an option for high-end PHEV and EV cars, without much traction for general consumers.

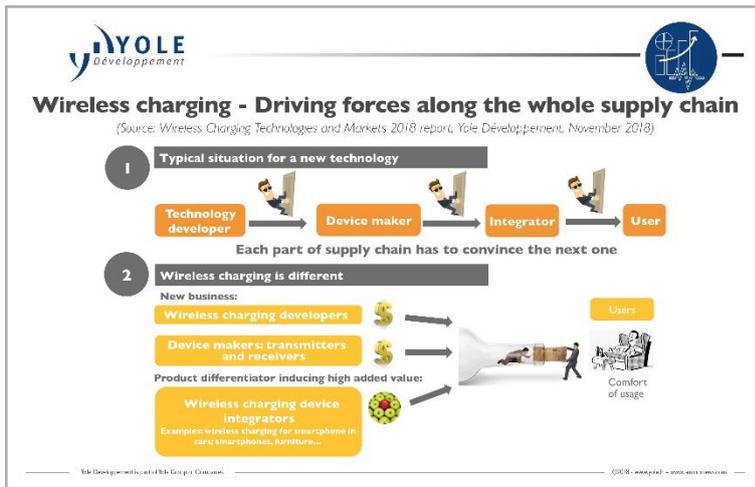
But, is the industry ready for mass production? At Yole, analysts are quite confident with the future... The apparent technical complexity of putting a smartphone into a strong electromagnetic field has efficiently been handled by technology developers. In just a few years a complete industrial chain focused on mobile phone inductive charging has coalesced.

*“It is interesting to note that the value chain for inductive charging is quite similar to the one in development for resonant charging,” explains **Milan Rosina, PhD, Principal Analyst at Yole**. “Indeed, even if the physical mechanism is different, the technological content is quite similar: consisting of inverters, rectifiers, drivers, buck converters, and coils.”*

In fact most industry players are developing products for both technologies, offering component samples for 6.78 MHz resonant

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<sup>1</sup> EV/HEV : Electric and Hybrid-Electric Vehicles



charging, and at the same time semiconductor components for 105 - 205 kHz inductive charging. Infineon Technologies, for example is following this path.

Though still nascent, the industrial chain is already consolidated, with large semiconductor corporations offering best-in-class electronic components. Player diversity is mainly on the integration side right now, with wireless charging popping up in diverse new systems ranging

from cars to furniture...

A detailed description of the [Wireless Charging Technologies and Markets 2018 report](#), is available today [on i-micronews.com, Power Electronics reports section.](#)



## ABOUT THE REPORT:

### [Wireless Charging Technologies and Markets 2018](#)

*The way consumers charge their smart devices is about to change forever, with wireless charging systems expected to surpass 1B units per year by 2024.* – Produced by Yole Développement (Yole).

#### Companies cited in the report:

Amazon, Audi, Apple, Bird, BMW, Daihen, Dell, Delta Energy Systems, Energous, Evatran, Heads, IDT, iHome, IKEA, iN<sup>2</sup>POWER, Infineon, JBT, KAIST, LimeBike, LG, Maxell, Murata, Nissan, PowerbyProxi, Powercast, Qualcomm... [Full list](#)

#### Authors:

- **Antoine Bonnabel** works as a Technology and Market Analyst for the Power & Wireless team of Yole Développement. He carries out technical, marketing and strategic analyses focused on RF devices, related technologies and markets.

Prior to Yole, Antoine was R&D Program Manager for DelfMEMS in France, a company specializing in RF switches. He supervised Intellectual Property and Business Intelligence activities of this company. In addition, he also has co-authored several market reports and is co-inventor of three patents in RF MEMS design.

Antoine holds a M.Sc. in Microelectronics from Grenoble Institute of Technologies in France and a M.Sc. in Management from Grenoble Graduate School of Business, also in France.

- **Milan Rosina**, PhD, is Principal Analyst, Power & Wireless / Batteries, at Yole Développement (Yole), within the Power & Wireless division. He is engaged in the development of the market, technology and strategic analyses dedicated to innovative materials, devices and systems. His main areas of interest are EV/HEV, renewable energy, power electronic packaging and batteries.

Milan has 20 years of scientific, industrial and managerial experience involving equipment and process development, due diligence, technology, and market surveys in the fields of renewable energies, EV/HEV, energy storage, batteries, power electronics, thermal management, and innovative materials and devices. He received his PhD degree from Grenoble Institute of Technology (Grenoble INP) in France.

Milan Rosina previously worked for the Institute of Electrical Engineering in Slovakia, Centrotherm in Germany, Fraunhofer IWS in Germany, CEA LETI in France, and utility company ENGIE in France.

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The "More than Moore" market research, technology and strategy consulting company Yole Développement, along with its partners System Plus Consulting, PISEO and KnowMade, support industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business. . For more information, visit [www.yole.fr](http://www.yole.fr) and follow Yole on [LinkedIn](#) and [Twitter](#).

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