

POWERINSIGHT



Battery Life: Is That All There Is?

HOW BATTERY PERFORMANCE IN 4G DEVICES CAN IMPACT FUTURE CUSTOMER LOYALTY

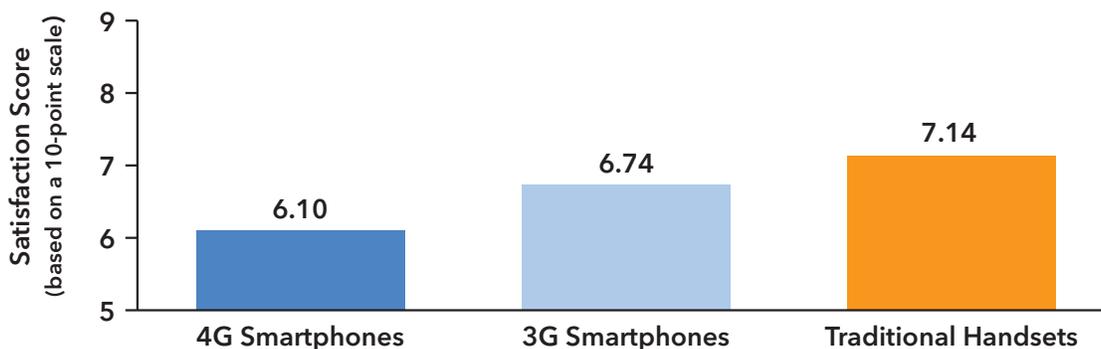
Smartphone customers are increasingly citing short battery life in their 4G device, which leads to lower satisfaction and has the potential to impact their loyalty in the future. According to recent research conducted by J.D. Power and Associates, 4G smartphone customers are highly satisfied with the processing speed, styling, and utility of their devices, but are less satisfied with battery life. This not only impacts future customer loyalty but also the bottom line for wireless carriers and handset manufacturers.

Wireless carriers and manufacturers are already taking steps to combat this issue. For example, Verizon Wireless has begun offering the Motorola Droid RAZR MAXX, a 4G LTE smartphone with a 3300mAh battery, which has 21 hours of talk time between charges, according to the manufacturer.

Customers' expectations regarding battery life have evolved over time. Several years ago, it was typical for the battery to last for several days on a single charge. Today, customers who have upgraded to smartphones must charge their battery far more often. Many customers charge their device battery on a daily basis, or even more often, depending on their usage level. Satisfaction in one metric has declined during the past 5 years—in 2007, smartphone customers rated satisfaction for *Battery life before recharging* 7.17 on a 10-point scale, compared with 6.91 among customers with traditional handsets. However, in 2012, satisfaction among these customers has declined to 7.14 and 6.67, respectively.

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Satisfaction with Battery Performance



Source: J.D. Power and Associates 2012 US Wireless Smartphone Satisfaction StudySM and J.D. Power and Associates 2012 US Wireless Traditional Mobile Phone Satisfaction StudySM

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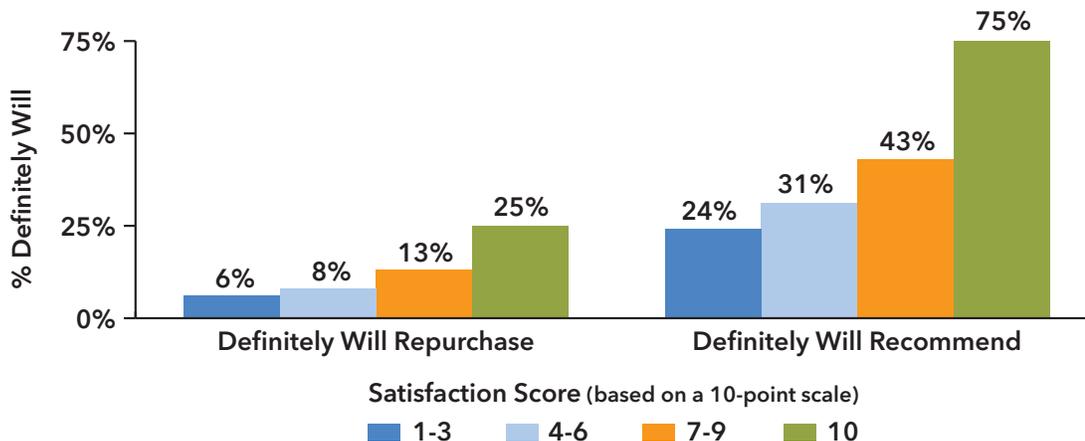
In fact, according to findings in the *J.D. Power and Associates 2012 US Wireless Smartphone Satisfaction Study*SM and *2012 US Wireless Traditional Mobile Phone Satisfaction Study*SM, satisfaction with battery performance is the lowest-rated attribute in the Smartphone Satisfaction Index model. What is perhaps more striking is how low satisfaction levels with battery performance are among 4G smartphone customers, compared with customers who own 3G smartphones—6.10 vs. 6.74, respectively.

This decline in satisfaction is likely due to two things. While 4G network deployment continues, new 4G smartphones use substantial battery life searching for next-generation network signals that aren't there yet. In addition, 4G customers are also far more engaged with their devices—they talk, text, email, and surf the Web more often than do customers with 3G smartphones or traditional handsets, which puts a significantly higher demand on the battery.

It is critical for wireless carriers and manufacturers to consider the impact of battery life on long-term brand loyalty among customers. A consistently poor battery experience may result in customer defections or higher rates of merchandise returns. Customers who provide high ratings for their handset battery are more likely to repurchase the same brand. The 2012 study finds that 25% of 4G customers who are highly satisfied with their battery (a rating of 10 on a 10-point scale) say they “definitely will” repurchase a device from the same manufacturer, compared with just 13% of customers who provide ratings of 7, 8, or 9, and only 6% of customers who provide ratings of 1, 2, or 3 points. A device with strong battery life may lead to increased advocacy—while 75% of 4G customers who provide a rating of 10 for their battery say they “definitely will” recommend their device to others, this rate drops to 43% among customers who rate their battery 7, 8, or 9, and to just 24% among those who rate it 1, 2, or 3.

Loyalty and Advocacy by Battery Performance

4G Smartphones



Source: *J.D. Power and Associates 2012 US Wireless Smartphone Satisfaction Study*SM and *J.D. Power and Associates 2012 US Wireless Traditional Mobile Phone Satisfaction Study*SM

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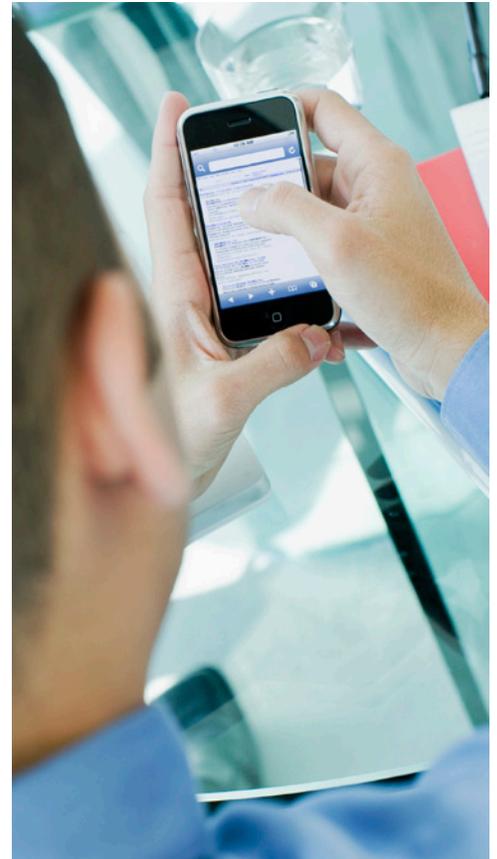
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As may be expected, device specifications and features impact battery satisfaction levels. Examining the customer experience at the model level, J.D. Power research finds that customers who own larger (and likely heavier) devices with screen diagonals of 4" to 4.5" provide ratings of just 6.06, compared with 7.06 among those whose devices have screens with diagonals of 3" to 3.5." Camera specifications also impact battery performance. For instance, battery satisfaction ratings for smartphones equipped with 8+ megapixel cameras is just 6.19, compared with 6.96 for devices with cameras in the 5-7 megapixel range. In addition to device specifications, increased feature usage is a key battery performance driver.

Usage patterns are driven by 4G networks and mobile applications. For instance, 4G customers spend 114% more time viewing movie and video applications on their device than do 3G customers. In addition, 4G customers are able to download movies more quickly and view them on more vibrant screens, which requires a significant amount of battery life. Similarly, compared with 3G smartphone customers, 4G customers spend 32% more time using messaging applications, which likely adds to battery depletion, and 29% more time using mobile social networking sites such as Twitter, Facebook, and LinkedIn.

The study also finds substantial differences in battery satisfaction with 4G smartphone manufacturers. While most 4G-enabled devices currently have Android operating systems, they are manufactured by several OEMs. Battery satisfaction ranges from a high of 6.60 among 4G smartphone customers with devices manufactured by Samsung to a low of just 5.78 among customers whose devices are manufactured by HTC.

Heavier device usage and less-than-adequate battery life are resulting in higher demand for spare batteries. Approximately 10% of all smartphone customers have purchased a spare battery. Among customers who do not currently own a spare battery, 40% of 4G smartphone customers indicate they would like to purchase one in the future, compared with 28% of 3G smartphone customers and 19% of traditional handset customers. This percentage is likely to grow as the average 4G device ownership period lengthens, since batteries generally have shortened recharge intervals over time.



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In order to sustain revenue growth, retention, and repeat purchases, J.D. Power recommends the following actions for handset manufacturers and wireless carriers:

- **Educate customers to connect to Wi-Fi rather than 4G networks to extend battery life.** J.D. Power research shows that 4G customers who frequently use Wi-Fi provide ratings of 6.22 for battery life, compared with just 5.80 among customers who do not use this feature. Battery satisfaction is also much higher among 3G customers who regularly use Wi-Fi networks, compared with those who do not (6.91 vs. 6.37, respectively). Using Wi-Fi not only offloads traffic from cellular networks, but may also permit more rapid downloads, which may impact satisfaction with overall device performance.
- **Implement post-transactional and device upgrade tracking programs to identify the device features that most foster loyalty and positive mentions.** It is critical that wireless carriers and manufacturers ensure customer needs are still being met in the days and weeks following a 4G device upgrade, as more sophisticated technology may pose new challenges for them. Soliciting feedback in the weeks following an upgrade may serve as a way to instill customers' confidence in their wireless investment. J.D. Power recommends a holistic approach of measuring customer satisfaction that includes loyalty metrics, key performance diagnostics, and competitive strengths—all of which will serve as a more comprehensive measurement. Batteries are just one of several aspects that impact overall satisfaction with wireless devices; however, without sufficient battery life, 4G customers are unable to enjoy the benefits of mobile applications, streaming video, GPS navigation, high-powered processors, and faster data exchange.

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ADDITIONAL ACTIONS AND CAPABILITIES

- **Identify how social media can be utilized as a solution to battery issues.** J.D. Power has the ability to collect and evaluate consumer sentiment about 4G smartphone models in its natural form—unprompted. J.D. Power has advanced social media intelligence solutions to the degree that they can be easily integrated into existing research, far surpassing the basic monitoring and intervention tools used today.
- **Consider conducting product clinics to evaluate new device capabilities, especially those that are 4G-enabled, to simulate real usage conditions.** J.D. Power has the ability to provide real time data on the customer experience as it relates to device usage and the relationship between critical elements that drive overall satisfaction experience such as battery management.

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