

Walmart's Electronic Receipt App

Technology has been accused of ruining many things in the world and in society, but there are times when it helps to preserve the natural elements around us by replacing things that once hurt the environment with more eco-friendly solutions. Such is the case with paper – more specifically, the ability to keep a few (million) more trees sprouting up and keeping oxygen levels at a sustainable level.

E-receipts, paperless storage, and other forms of technology that have reduced the need for paper are poised to start making a difference. There are trade-offs of course; every device that replaces paper requires power and our rate of consumption is an entire other element of conservation that needs to be addressed. Still, the more trees we can keep from falling for the sake of communication and record keeping, the better.

Beyond the cost savings and environmental benefit (an estimated 9.6 million trees are cut each year for receipts in the United States, according to allEtronic, a digital receipt company), the e-receipts present marketing opportunities for retailers. Gap, Nordstrom and many other stores, for example, add the customer's e-mail address to a mailing list for follow-up offers.

Despite resistance from some customers who are opposed to the digital shift, the use of e-receipts has reportedly been growing in popularity since Apple and other retailers, such as Urban Outfitters and Anthropologie, began offering the paperless receipt options. For customers, there are numerous benefits to paperless receipts. In addition to being environmentally friendly, electronic receipts minimize the clutter of handbags and wallets. Perhaps even more advantageous, if well stored in an email account, these e-receipts eliminate the concern over the possibility of losing a receipt in the case that an item needs to be returned.

Remarkably, 9,600,000 trees are cut down each year just to produce paper receipts. To top that, the amount of CO₂ emitted by producing one ton of receipt paper – just one – is equivalent to the amount of exhaust a car emits while driving for an entire year.

“Walmart serves customers more than 200 million times per week at more than 9,600 retail units” (Walmart Corporate Financial Fact Sheet). There are currently 369 stores in Canada and counting, which makes up approximately 3.84% of all Walmart stores globally. This works out to be approximately 7.68 million customers per week, which is approximately 1,097,143 transactions per day which equates to a lot of paper.

Paper receipts are a remnant of the past. With today's electronic alternatives, there is no reason why consumers or retailers need paper receipts. Electronic versions are not only legal and valid, but much more efficient. So what's keeping retailers and consumers from adopting electronic receipts?

Environmental Damages

In the 2003–2004 National Health and Nutrition Examination Survey (NHANES) study, the Centers for Disease Control and Prevention estimated that 93% of people in the United States are exposed to BPA, with higher exposures in children than adults. The potential exposure of fetuses and infants to BPA is especially concerning because BPA is not metabolized effectively during these highly sensitive stages of human development.

Bisphenol A (BPA) -- a substance that may have harmful health effects -- occurs in 94 percent of thermal cash register receipts, scientists are reporting. The recycling of those receipts, they add, is a source of BPA contamination of paper napkins, toilet paper, food packaging and other paper products.

50% of forests have been cleared and 50% of that is for paper. That's nine million trees a year, just for paper. It takes approximately 15 trees to produce a single ton of paper. Receipt paper demands in the US are 640,000 tons per year. This equates to 9,600,000 million trees cut down each year just to produce paper receipts.

It takes approximately 390 gallons of oil to produce a single ton of paper. At 640,000 tons of thermal receipt paper demanded per year, that's 249,600,000 gallons of oil used during production. That much oil could produce 115,885,714 gallons of gas that could fill 7,023,376 gas tanks (assuming an average tank size of 16.5 gallons). It also takes approximately 19,075 gallons of H₂O to produce a single ton of paper. This equates to 1,220,800,000 gallons of H₂O used during the production process of receipt paper.

The amount of CO₂ emitted by producing one ton of receipt paper is equivalent to the amount of exhaust a car emits while driving for an entire year. Also, approximately 2,278 lbs of trash is produced while producing a single ton of receipt paper. This means 1,457,920,000 lbs of trash are being fed into our landfill. This produces enough CO₂ emissions to significantly damage the earth's ozone layer, leading to global warming.

We need strong incentives to move to electronic receipts

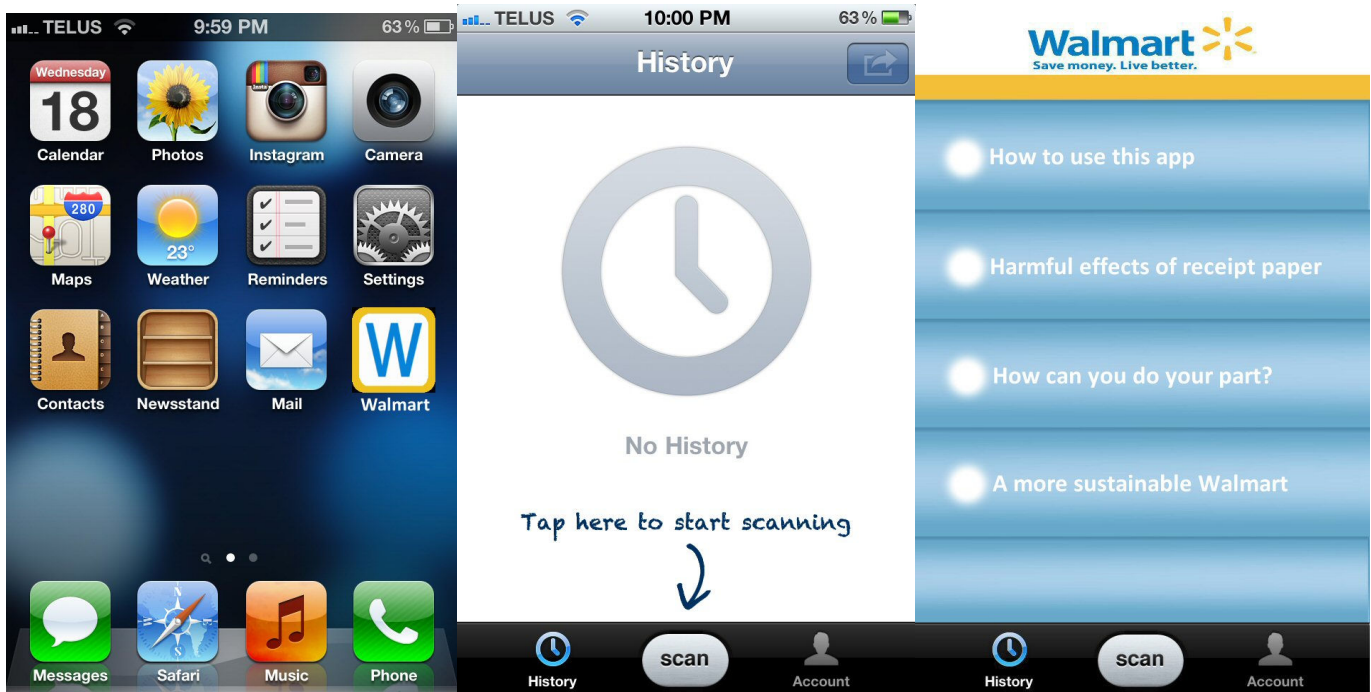
It seems clear that the main problem here is inertia. We are accustomed to paper receipts; some people really want them. It is, in large part, a generational thing. The desire for a tangible, paper receipt is probably more common amongst older consumers. Therefore, what we really need is a strong incentive to move to electronic receipts. We need incentives – primarily monetary – that motivate consumers and retailers to push toward the vision of paperless retail purchases. Here is a list of motivations:

- Retailers gain valuable customer data. Electronic receipts need to be delivered somewhere; and by using our application, and providing their email and minimal information, they will have a receipt storage system accessible at their fingertips.
- Consumers get special offers. Most of us don't like irrelevant, aggressive marketing, but we all love good deals on things we truly want or need. When marketing is relevant, we love it. Of course, this requires some give and take. If we are willing to give up more of our personal shopping history and an email, the better marketers will make it worth our while by offering discounts or coupons on products we would normally purchase at Walmart. Allowing for cookie tracking technology to see what type of items we are viewing, and then tailoring the specific deals that we are shown by this criteria; this type of marketing is already in use with Amazon.ca.

The Application: The Retailer App (Walmart or other)

The application uses the camera on your smart phone to scan the product barcode, which will electronically transfer the receipt information to your Walmart App. The barcode will be available to scan on the debit/credit pin pad as soon as you finish your transaction.

- The application could include:
 - Previous receipts organized according to day/month
 - A calculation of how much was spent on a specific product or category of product in each month.
 - Offers that are currently available at Wal-Mart or a point system.



Within the next five years the many of the worlds retailers will be switching to paperless transactions. We believe that the ease of implementation would be much easier if information would be available online. Since much of the population today is making a shift to smart phone technology, there is also an opportunity to lead the industry with an innovative type of retailing.

Creating an application for a smart phone that allows each customer to keep track of their receipts, view weekly flyers, have access to pre-ordering specific items, and even viewing whether or not an item is in stock, would allow Walmart to improve customer satisfaction, and help the environment in the process. Within this application there may also be space for an employee section. This section would allow these employees to sign in and view their schedule, as well as receive their pay-stubs electronically.

Many businesses are in search of ways to become more sustainable while bettering the company economically. We believe the future of business will be paperless and being a first mover into the smart phone and app area will be extremely advantageous for the company. Paper has numerous negative impacts on the environment and we believe this app is the answer that Walmart is looking for in the pursuit of sustainability.