DIGITAL GROCERY COMMERCE: INSIGHTS FOR ENHANCING CONSUMER CONNECTION WITH GROCERY SHOPPING APPS

THE PECK FELLOWSHIP
YEAR TWO RESEARCH REPORT 2014

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DIGITAL GROCERY COMMERCE:

Insights for Enhancing Consumer Connection with Grocery Shopping Apps

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DIGITAL GROCERY COMMERCE: Insights for Enhancing Consumer Connection with Grocery Shopping Apps

EXECUTIVE SUMMARY

Presently grocery shopping apps offered by retailers seem to be one-size-fits-all and not strategically integrated within the stores’ marketing plan. With IRI’s assistance, using their DigitaLink™ shopper profiles, the report examines which grocery shopping app functions and barriers dominate in each shopper segment. In this report four segments are identified as relevant to grocery retailers in crafting a digital mobile strategy for shopper engagement. Respondents are also classified as Super Heavy/Heavy Shoppers and Medium/Light Shoppers based on their self-reported expenditures on groceries in a typical week. This allows retailers to customize desired app offerings by various digital shopper segments and basket size. This optimizes user experience with the app. In addition, an interactive TURF (Total Unduplicated Reach and Frequency) tool, titled the SJU Peck Grocery App Dashboard, is developed allowing identification of primary app functions desired for specific target groups based on digital shopping segment, basket size, and frequency of interest of buying groceries online. This allows highly specific targeting of app features.

For retailers, the report highlights the following opportunities:

- The primary grocery shopper who is a grocery mobile app consumer comprises a shopper universe characterized by higher income, increased comfort with technology, and larger households. In particular these shoppers are less price sensitive, less into social media, and more interested in digitally provided solutions.

- The most digitally active FUTURE segment spends significantly more on grocery and CPG products than other segments. Conversely your OPPORTUNITY segment, active on social media, offers few heavy shoppers, and smaller households. These findings question an aggressive marketing campaign focused on social media at the expense of targeted customized apps to the most digitally engaged shoppers.
• Campaigns on social media targeting the OPPORTUNITY segment need to focus on exclusive offers for trial. While it may succeed in engaging them, they will still represent a smaller payout overall because there are fewer of them and they make smaller grocery purchases.

• Shoppers have transferred traditional shopping behavior from print to digital. This represents both a disappointment and an opportunity for behavior change. Recognizing and targeting the shopper segments more interested in convenience, solution, and personalized services provided via grocery apps, and targeting these segments, increases the likelihood for success and for more sophisticated shopper engagement and loyalty.

• Selective segmentation via a customized and focused grocery app offers real promise for expanding app reach and growing the shopper base. Achieving a threshold of solution based apps will likely require both shopper education and introductory enticements.

• In several of the shopper segments examined only a limited number of app functions were needed to reach a high level of interest and unduplicated reach, suggesting the opportunity for highly efficient yet straightforward apps easy to maintain and operate.

Apps perform better when customized and simplified, efficiently streamlining shopper use and retailer maintenance. The customization builds brand and deepens shopper engagement. It also leaves the shopper with a sense of control in the relationship they are building with their store.

The research identifies which barriers to apps’ use are of most concern and need to be neutralized within each shopper segment. This enables more successful target marketing and design of the grocer’s app for each digital grocery shopping segment yielding greater repeat use of the app. There also are insights for privacy concerns by shopper segment, identifying which segments need extra privacy assurance and which exhibit less concern.

• Concerns overall with app usage are somewhat important but not insurmountable. They are different and with different intensity across the digital shopping groups. Technical concerns are paramount for the digitally active FUTURE segment. Address technical issues before an app function is released. Focused customized apps require fewer functions which helps minimize technology underperformance.

• Privacy concerns are real and complex. As a concern or barrier, privacy intrusion rises to one of the top concerns but with subtle differences across segments. The FUTURE and PRICE groups rank “too many requests for surveys and personal information” as a higher concern accompanying privacy intrusion.
The tension for privacy in a digital arena, as represented with app use, seems largest with the shopping segments most focused on price. Their concerns for privacy are lessened by provision of a discount. In essence they need to be strongly enticed to participate in the app by an incentive to “sell” their privacy compensating them for its loss and the retailer’s access. This is especially true since they are skeptical that digital participation in the path to purchase improves their ability to save money.

The research yields valuable information enabling strategic deployment of app function and design for more customized use and enhanced profitability. It offers insights for strengthening the retailer’s connection with the shopper in an era of increasing erosion in the shopper store relationship.
INTRODUCTION

The past year saw an explosion in the attention paid to the use of digital and mobile assisted technology to enhance the grocery shopping experience, or to enable online grocery purchasing. Presently grocery shopping apps offered by retailers seem to be one-size-fits-all and not strategically integrated within the retailer’s marketing plan. They are best characterized as “me-too” offerings with retailers providing duplicate generic offerings and services packed into an increasingly complicated mobile app.

The provision of grocery websites and apps has grown exponentially as well as the study of these services and accompanying shopper behavior. The growing availability of grocery shopping apps is accompanied by increasing prognostication on the enticing potential of m-assisted retailing and online grocery sales. The optimism is moderated with more recent reports of some consumer disillusionment with the technology. Several recent studies affirm that consumer embrace of digital grocery commerce is uneven.1 Grocery shopping apps do not provide an efficient mass market path to purchase. Inherent in their digitally accessed nature, they excel at efficiently delivering highly customized focused app functions to targeted shopper segments, especially when targeted by discrete digital shopping behavior, including online grocery shopping engagement.

PECK FELLOWSHIP YEAR ONE: BACKGROUND

The Peck Fellowship Year One research “Digital Grocery Commerce: Exploring the Potential for Grocery Shopping Apps”2 explored consumers’ interest in grocery shopping apps with both users and aware non-users. It provided an exhaustive list of suggested grocery shopping app functions as well as perceived barriers to grocery shopping app use. The Peck Fellowship Year One research also suggested the user’s digital familiarity and size of their grocery shopping basket may influence their interest and use of grocery shopping apps. The Peck Year One study concluded by commenting:

2 Published by FMI in June 2013 and available for download: www.fmi.org, Store tab.

Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps
- 7 -
In conclusion, m-assisted grocery shopping holds potential in a rapidly growing world of digitally connected smartphone owners. The user group, and hence the opportunity, may be larger than anticipated. Research which unveils the grocery shoppers’ behaviors and preferences in the digital space offers winning insight for successful sustainable innovation for retailers by building digital relationships and anticipating shopper needs. (p.30)

PECK FELLOWSHIP YEAR TWO:
RESEARCH FOCUS AND METHODOLOGY

The Peck Fellowship Year Two research study was a web survey conducted in Spring 2014 with 657 respondents who are primary grocery shoppers, with a gender distribution of 44% male and 56% female which aligns with the FMI Grocery Shopping Trends 2014 gender distribution of 43% male and 57% female for primary grocery shoppers. Appropriate to a study on mobile-assisted grocery shopping, the Peck survey sample was screened for smartphone ownership and awareness of apps. This yields a respondent universe both enabled and aware of grocery shopping apps. Each respondent’s digital behavior was assessed by IRI using their proprietary algorithm. This classified each respondent into one of IRI’s six DigitaLink™ grocery shopper digital profiles. These are presented and further discussed in Appendix A.

Digital Shopper Segmentation

For purposes of the Peck analysis, four digital segments are highlighted for the potential they hold in representing shopper digital segments. These four segments are useful for examining and projecting grocery shopper digital behavior and the mobile grocery app functions of particular interest to each segment. Together these four segments represent 72% of primary grocery shoppers using smartphones and aware of apps.

FUTURE (IRI Digitize me! Enthusiasts): They are confident and active digital grocery shoppers and represent a growing segment of shoppers in the digital category. Labeled FUTURE they project the potential of a growing, active, and maturing shopper segment characterized by youth, income, larger households, and embrace technology. They are not as focused on access to economic information, but rather the convenience and higher level savings accrued through convenience and personalization.
**TOMORROW** (IRI Wired for Work): These shoppers stand out for the near term potential they represent as digitally savvy grocery shoppers who are active smartphone users. They could be easily converted to grocery app use if approached with their app functions of top interest. They are a more affluent group and will be enticed by meaningful convenience and personalization balancing traditional interests in price.

**PRICE** (IRI Show me the Money): These shoppers by definition, are seeking price and represent a traditional grocery value segment, especially important to understand as they have more options today in the array of available shopping channels. Understanding mobile app functions that appeal especially to their needs and interests creates a certain differentiation and switching cost advantage for the retailer, thus modulating the segment’s primary focus on price. Done well, a larger piece of the PRICE segment’s wallet can be captured through customized grocery apps.

**OPPORTUNITY** (IRI Socializers): This group was most surprising because their digital sophistication in communicating and mastering multiple social formats did not extend to interest in grocery shopping apps. They engage in some entry behavior such as following brands on social media but do not currently engage in grocery apps or significant online shopping, which has not yet penetrated the social sites in a universal way. They are labeled OPPORTUNITY because the growing sophistication of both brands and the social network platforms in promoting and providing online purchase opportunity will enable and encourage such behavior. The retailer with the right approach and offer of grocery shopping apps which resonate with this group can capture them as consumers.

Data were also collected on the respondents’ self-reported total spend on grocery products, in store and online, in a typical week. This allowed a classification of respondents as Super Heavy/Heavy buyers and Medium/Light buyers. Data were also collected on a respondent’s reported frequency of buying groceries online, and their concern for privacy when using grocery shopping apps. Respondents were asked if they ever used any of 20 grocery shopping apps (shown on page 15) and their interest in using each. They were queried about 16 barriers to using grocery shopping apps, as identified in Year One, and their level of concern for each. Lastly data were collected on demographic household composition. The author can be consulted regarding the questionnaire, data set, and SJU Peck Grocery App Dashboard of Total Unduplicated Reach and Frequency (TURF) analysis.
SJU Peck Grocery App Dashboard

An interactive SJU Peck Grocery App Dashboard was developed for the 20 grocery shopping apps using a TURF analysis to determine the subset of grocery shopping app functions with the greatest unduplicated reach and frequency for any identified market segment (digital classification, level of grocery spend, level of in-store spend, online grocery shopping frequency) separately or combined. This stepwise analytic technique eliminates a duplication of count when scoring which combinations of app functions generate the largest level of interest for selected market segments. It evaluates the list of items and determines which combinations result in the largest net reach, in terms of the respondent’s scored interest level per item, for the largest number of respondents.

The SJU Peck Grocery App Dashboard (see Appendix D) is available for customized comparison by the author for shopper interest in specified app combinations within subgroups identified in the survey. It is flexible to allow examination of specified apps separated from the list of the whole, as well as the forced inclusion of specified apps in a final analysis. The app combinations can be customized from the list of 20 in the study, shown on p. 15, for examination within selected subgroups. Targeted respondents can be selected among six IRI DigitaLink™ classifications which are discussed in Appendix A, three total grocery spend categories (super heavy, heavy, and medium/light), two in-store spend categories (super/heavy and medium/light), four self-reported frequency of buying groceries online (frequently, occasionally, seldom, never), and three degrees of scored interest (top 1, 2, or 3 box of interest for using the app function on a 7 point interest scale).

SUMMARY OF SHOPPER SEGMENTATION FINDINGS

The research shows clear segmentation among the qualified respondents. Not surprisingly, the FUTURE and TOMORROW categories were more familiar with and interested in grocery shopping apps. Being heavier users of digital devices, they have a natural affinity for mobile apps. The digital groups also are consumers with the most Super Heavy/Heavy market baskets. A great deal of opportunity exists for app customization for specific target market groups. Most importantly, the more active app users are somewhat less sensitive to economically driven apps and the need for incentives. On the other hand, it appears the lighter spend and less digitally
active consumers expect an economic incentive to engage in the grocery shopping app. The group most engaged in social media is less interested in grocery shopping apps.

**App Use and Shopping Behavior**

Overall, shoppers still project traditional shopping behaviors onto the grocery app expecting it to provide coupons, access to the weekly circular, and assistance via an electronic shopping list. The dominance of these familiar behaviors is strong and represents a failure of current apps to evolve their traditional shopping uses into grocery shopping behavior change. The opportunity to successfully advance to a new threshold of app delivered convenience, which is solution centered, is still secondary to traditional shopping behavior.

One strong finding was the limited number of app functions needed to reach a high level of interest with various consumer market segments reviewed. This suggests high potential for customization and simplification of grocery shopping apps. This has potential to diminish many of the concerns consumers currently report for complicated and underperforming apps.

**Retailer takeaway:** A primary grocery shopper, who is a grocery mobile app consumer, is a smartphone and app user by definition. This is a shopper universe of higher income, increased comfort with technology, and larger households. In particular they are:

- Less price sensitive
- Less into social media, and
- More interested in digitally provided solutions.
Digital Segments

The graphs below emphasize the current differences in these four segments highlighted in the Peck research. These include FUTURE, TOMORROW, PRICE, and OPPORTUNITY for their future potential to the retailer in the digital grocery app space. It also portrays the proportional size of each digital segment and the varying potential each represents with a targeted grocery app strategy.
**Retailer takeaway:** Real potential exists for targeting grocery shoppers by their digital shopping preference. The savviest digital shoppers, FUTURE and TOMORROW, offer the most opportunity, the least price sensitivity, and spend the most time online.

### Size of Grocery Shoppers' Weekly Spend

Given the importance of the shopper’s basket size to the retailer, the Peck study wanted to explore if basket size differed among digital shopper segments, and if heavy shoppers had different preferences for grocery apps. Researchers collected self-reported expenditures from respondents for a typical week of shopping, both in-store and online, for grocery and CPG products.\(^3\) A survey of industry practice and a literature review determined cutoffs for the definition of Heavy Shopper and Supper Heavy Shopper. Accordingly, the top two deciles of reported total spend ($250+/week in this research sample’s distribution) was designated the cut off for identifying a Heavy Shopper and the top decile ($375+/week) for a Super Heavy Shopper. For purposes of this analysis, two shopper levels were analyzed: Super Heavy/Heavy ($250+) and Medium/Light ($249 and less).

While little difference occurred among the distribution of Medium/Light shoppers, there was a strong correlation with the digitally savvy FUTURE segment and their size of basket.

#### DIGITAL SEGMENT BY SIZE OF GROCERY BASKET

<table>
<thead>
<tr>
<th></th>
<th>BASKET SIZE: SUPER/HEAVY</th>
<th>MEDIUM/LIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUTURE</td>
<td><strong>46%</strong>(^{**})</td>
<td>19%</td>
</tr>
<tr>
<td>TOMORROW</td>
<td>11%</td>
<td>16%(^{**})</td>
</tr>
<tr>
<td>PRICE</td>
<td>12%</td>
<td>17%(^{*})</td>
</tr>
<tr>
<td>OPPORTUNITY</td>
<td>6%</td>
<td>18%(^{**})</td>
</tr>
</tbody>
</table>

\(^{**}\) significant at >95\(^{th}\) percentile, \(^{*}\) significant >90\(^{th}\) percentile; sum vertically

---

\(^3\) Q 13 Please think about how much you spend on groceries. Think about all of the types of products that are available in the grocery store – food, cleaning products, personal care products, paper products, housewares, etc. Think about all the grocery stores you visit as well as groceries you may buy online. In a typical week, how much does your household spend on: (1) Grocery products purchased in a store__, (2) Grocery products purchased online__
Retailer takeaways: The most digitally active FUTURE segment spends significantly more on grocery and CPG products than other segments. Conversely the OPPORTUNITY segment, active on social media, offers few heavy shoppers, and smaller households. These findings question an aggressive marketing campaign focused on social media at the expense of targeted customized apps to the most digitally engaged shoppers.

Campaigns on social media targeting the OPPORTUNITY segment need to focus on exclusive offers for trial. While it may succeed in engaging them, they will still represent a smaller payout overall because there are fewer of them and they make smaller grocery purchases.

INTEREST IN GROCERY SHOPPING APP FUNCTIONS

The Peck Fellowship Year One research identified 20 grocery shopping apps. Half are characterized as Convenience apps (yellow) which aid the user in approaching or executing their shopping experience. These include the app functions of creating an electronic shopping list, providing scanning or checkout services, or an ingredient list for a specific recipe. A quarter of the app functions are classified as Economic (green) because they tangibly assist the user in securing savings. These popular services include price comparison, identifying coupons and sales offers, and tracking the amount spent while shopping. Another quarter of the app features are labeled Personalization (blue) as they provide a service customized to the user such as remembering their past shopping history or tracking loyalty points specific to the user.
GROCERY SHOPPING APP FUNCTIONS
SUGGESTED BY RESPONDENTS & CATEGORIZED BY PURPOSE

Convenience:
- Create shopping list
- Suggest store route for shopping
- Locate specific products in store
- Provide weekly circular
- Check out / scanning capability
- Recommend substitute products
- Recipe recommendations
- Ingredient list for selected recipe
- Provide access to customer service
- Provide nutrition info on product

Economics:
- Price comparison
- Identify coupons and sale offers
- Track amount as spent (size of basket)
- Provide exclusive discount to app user

Personalization:
- Remember past shopping history
- Customized product recommendations
- Personal event reminders (holiday, birthday, anniversary, etc.)
- Track loyalty points and incentive programs
- Provide specific dietary recommendations

Peck Year One Research, 2013

The graphs in Appendix C show the top box response (of 7 responses) “Extremely Interested in using an app that could …” for each of the 20 grocery app functions examined. The graphs show the response for the four digital segments studied. Scores are reported individually for each of the 20 grocery shopping apps in the study and are color coded for their classification as Convenience (yellow), Economic (green), and Personalization (blue).

The FUTURE segment, comprised of digital enthusiasts, dramatically outscores all other segments for their interest in all of the app functions, displaying their familiarity, confidence, and embrace of app use. The TOMORROW segment and PRICE segment show selective but declining interest in app functions. The TOMORROW segment notably registers stronger
interest in Personalization apps than the PRICE and OPPORTUNITY segments. The social media OPPORTUNITY segment is exceptionally low in interest of all grocery apps.

Evaluating the app functions individually, the economic apps related to familiar grocery shopping behavior dominate. Grocery apps, to date, have not changed this shopping behavior, but rather have relocated it from print to digital access. Among the app functions most important to all of the app users are coupons, weekly sales, circular, exclusive discounts and the shopping list. The ability of an app to “track ‘spend’ while shopping” emerges as a desired capability, as does the ability to “scan and check out while shopping.”

A key disappointment to date, is the inability of grocery shopping apps to shift shopper behavior in the direction of new shopping solutions rather than simply identifying savings. Several industry studies confirm the shopper’s inertia to move past this traditional behavior. It is an area of behavior lag versus prognostications in the industry, and by the Peck Research Panel, which anticipated a quicker transition from traditional shopping behavior to more sophisticated and solution driven grocery app use. Encouraging shoppers to pursue solution based apps will require education and enticements to engage in new shopper behavior patterns.

Looking beyond the dominance of traditional shopping apps the research suggests the importance of solutions to differing digital segments. In the table below, comparing a more generic app function versus a more solution-focused version, the FUTURE and TOMORROW segments, especially, display preference for the solution function. The data again underscores the digitally savvy FUTURE segment’s strong interest in app use. In the data it is also evident there are lower interest scores for the more generic service app functions such as recipe downloads, ubiquitously available, and access to the store’s customer service.
Extremely Interested in using a grocery shopping app that could…

(“Extremely Interested” top box of 7 responses for strength of interest in the app)

<table>
<thead>
<tr>
<th>Solution/Generic Function:</th>
<th>FUTURE</th>
<th>TOMORROW</th>
<th>PRICE</th>
<th>OPPORTUNITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solution:</strong> Locate specific products while shopping</td>
<td>44%</td>
<td>21%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Generic:</strong> Provide shortest route to shop</td>
<td>38%</td>
<td>14%</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Solution:</strong> Shopping list for ingredients in specific recipe</td>
<td>44%</td>
<td>20%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Generic:</strong> Recommend recipes</td>
<td>38%</td>
<td>14%</td>
<td>10%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Retailer takeaway: Shoppers have transferred traditional shopping behavior from print to digital. This represents both a disappointment and an opportunity for behavior change. Recognizing and targeting the shopper segments more interested in convenience, solution, and personalized services provided via grocery apps, and targeting these segments, increases the likelihood for success and for more sophisticated shopper engagement and loyalty. Selective segmentation via a customized and focused grocery app offers real promise for expanding app reach and growing the shopper base. Achieving a threshold of solution based apps will likely require both education and introductory enticements.

Digital Shopping Segments:

Importance of Grocery Shopping App Total Unduplicated Reach

While the graphs presented in Appendix C display discrete interest in individual apps by four digital shopper segments, the data is misleading as the retailer’s grocery app’s appeal is the total of the app functions provided. Often the top apps are redundant in their function and appeal (e.g. weekly sales, coupons, and the circular) and duplicative, not bringing in additional app users. The inclusion of additional, non-duplicative app functions with specific appeal to the target group, often focusing on convenience and personalization, become the critical points of difference. This analysis acknowledges which app functions contribute most in enlarging the total group of shoppers expressing high (“extremely interested” top box score) in the combined apps.

Below the combined Total Unduplicated Reach and Frequency (TURF) reach of the 20 app functions is graphed for each of several potential target groups based on digital behavior, size of...
basket, and online grocery shopping behavior. For inclusion in the graph, the app function had to contribute a minimum of 1% incremental unduplicated reach to the apps total reach (TURF). While the economic apps mimicking traditional shopping behavior dominate, we quickly see difference in their importance across target groups and especially difference in the incremental reach coming from specific convenience and personalization functions. Also, the absence of economic app functions becomes identifiable. Their absence indicates that some segments are closer to advancing to more sophisticated solution use with app functions.

**Retailer takeaways:** Identifying the specific grocery shopping app functions of most interest to a target market permits the creation of a customized, meaningful, efficient, and highly compact app which should be easier to use and maintain.

![Chart showing 76% Reach for Digital Shoppers – Future segment](chart)

The graph for the digitally active FUTURE segment (above) shows an exceptionally high and efficient reach of three quarters of these shoppers with just four app functions. The “shopping list” and ability to “track loyalty points” emerge as two of these four functions.
The TOMORROW segment also shows similar interests and high reach through just four app functions but TOMORROW respondents are attracted to the “scan and checkout while shopping” feature rather than the “shopping list” as their point of difference.

Retailer takeaways: In several of the shopper segments examined, only a limited number of app functions are needed to reach a high level of interest and unduplicated reach, suggesting the opportunity for highly efficient yet straightforward apps easy to maintain and operate.
When the PRICE and OPPORTUNITY segments are examined for their combined reach, there are different patterns of response. Both segments are more fragmented and less successful in reaching exceptionally large portions of the target market with “extremely interested” (top box) passion for the app functions provided. The PRICE segment, true to their digital behavior profile, is attracted to economic app functions which help save money and monitor spending. They exhibit very traditional desires from their apps. Only the “shopping list” function, classified as a convenience function, is not directly devoted to savings. Because of the PRICE respondents’ preference for traditional shopping behaviors, easily pursued without an app, there is a lower potential reach of 54% expected from the combination of app functions presented.

54% Reach for Price segment

- Identify coupons and special sales offers
- Create a shopping list before I go shopping
- Track the amount I am spending while I’m shopping
- Provide my weekly sales circular
- Provide exclusive discounts to me for using the app

Traditional interests
Both price and convenience attractions
The OPPORTUNITY segment, made up of primary social media users, is particularly fragmented and with little attraction in total for grocery shopping app functions. Only a third of this segment is readily reached with an optimal combination of grocery shopping app functions. The passion, the extreme interest, is absent. The features most valued are exclusive discounts and scanning. Engaging this segment will take incentives and more solution driven apps such as tracking spending and locating specific products. Even then, the anticipated interest and expected reach within the OPPORTUNITY segment is limited.

33% Reach for Opportunity segment

<table>
<thead>
<tr>
<th>Feature</th>
<th>Interest Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide exclusive discounts to me for using the app</td>
<td>18%</td>
</tr>
<tr>
<td>Scan and checkout my items while I am shopping</td>
<td>5%</td>
</tr>
<tr>
<td>Create a shopping list before I go shopping</td>
<td>3%</td>
</tr>
<tr>
<td>Provide information on weekly sales</td>
<td>3%</td>
</tr>
<tr>
<td>Help me locate specific products within the store while I am shopping</td>
<td>2%</td>
</tr>
<tr>
<td>Track the amount I am spending while I'm shopping</td>
<td>2%</td>
</tr>
</tbody>
</table>

Less interest in apps

Fragmented interests:
Exclusive Discounts key
Scanning important
INCENTIVES NEEDED

Retailer takeaway: There is less efficiency in reaching large portions of the PRICE and OPPORTUNITY segments via grocery app functions. Their interest in app functions is more traditional, less strong, and more fragmented. They represent lower valued shopping baskets which may explain why they lack the intensity for grocery app savings and convenience, and require stronger economic incentives to capture their interests.
Size of Grocery Shopping Basket:

Importance of Grocery Shopping App Total Unduplicated Reach

In the sample, we found that Super Heavy/Heavy Shoppers ($250+/week) were also more digitally active so there is some similarity in the Super Heavy/Heavy Shopper preference for apps with the FUTURE digital segment. They are not quite as easily captured by grocery shopping apps (59% versus 55%) and they are slightly more fragmented with a bit more interest in convenience and personalized functions such as “scan and checkout” and “keep track of past shopping history,” both useful aids to a heavy shopper.

59% Reach for Super Heavy & Heavy Shoppers

The Medium/Light Shoppers were less engaged than the Super Heavy/Heavy Shoppers and more focused on economic advantages obtained through app use. Their app preference profile is very similar to the PRICE segment, with greater emphasis on economic apps and savings.
After recognizing the universal and traditional shopping behavior of seeking coupons and creating a shopping list, several differentiated app preferences are revealed. In the example below, these differentiated functions represent 9% of additional “extreme interest” in a grocery app for the Super Heavy/Heavy Shopper and 8% additional for the Medium/Light Shopper. These differences offer opportunities to customize app functions.
Different Desires in App Features After Coupons and Shopping List

Super Heavy/Heavy 59%
- Identify coupons and special sales offers (40%)
- Create a shopping list before I go shopping (5%)
- Track my retail loyalty points and incentive programs (2%)
- Scan and checkout my items while I am shopping (2%)
- Keep track of my past shopping history (10%)

Medium/Light 55%
- Identify coupons and special sales offers (43%)
- Provide exclusive discounts to me for using the app (6%)
- Create a shopping list before I go shopping (4%)
- Track the amount I am spending while I’m shopping (2%)

9%
- Track loyalty points
- Scan and checkout
- Track past shopping history

8%
- Exclusive discounts
- Track spending while shopping

Retailer takeaway: The Super Heavy/Heavy Shopper segment portrays “extreme interest” in more solution focused apps which can create brand differentiation and loyalty. The Medium/Light Shopper is focused on savings.
Online Grocery Shopping Frequency:

Importance of Grocery Shopping App Total Unduplicated Reach
Respondents identified their frequency of buying groceries online as Frequently, Occasionally, Seldom, and Never. Again, the pattern of economic interest which dominates the PRICE and the Medium/Light Shopper segments is evident in the group identified as Never Buys Groceries Online. Exclusive discounting and economic incentives are key to capturing these groups, and even then only capturing about half of the segment.

53% Reach with Shoppers who Never Buy Groceries On-Line similar to Med/Light

The group which Frequently Buy Groceries Online differs, and is more parallel in reach and extreme interest in grocery shopping apps to those identified in the FUTURE and TOMORROW segments, where there is overlap in active digital behaviors. The Frequently Buy Groceries Online segment differs with its extreme interest in an app function which “provides nutrition information on selected products.”

Retailer takeaway: Your Medium/Light Shopper, PRICE segment, and those who Never Buy Groceries Online have common limits regarding grocery shopping apps. They are only so responsive to apps and they respond to apps which provide economic savings. They want an economic incentive to engage.
71% Reach for shoppers who Frequently Buy Groceries On-line

It is possible to identify and offer differently focused and promoted combinations of app functions within specific target segment. This is apparent when looking at the side-by-side shopper profiles below:

**Exclusive Discounts v. Nutrition Details**

**Never Buy Groceries On-line: 53%**

- Provide exclusive discounts to me for using the app
- Identify coupons and special sales offers
- Create a shopping list before I go shopping
- Track the amount I am spending while I’m shopping

**Frequently Buy Groceries On-line: 71%**

- Identify coupons and special sales offers
- Create a shopping list before I go shopping
- Provide nutrition details on specific products
- Track the amount I am spending while I’m shopping

Nutrition emerges as a convenience feature.
Retailer takeaway: Looking at the unduplicated reach of grocery shopping app functions in various target segments reveals the segments where greater reach is available and extreme interest exists for more solution driven and personalized apps to build retailer brand and shopper loyalty.

CREATING A CUSTOMIZED APP: Easy Nutrition Shopping App
Predicting How Different Segments Respond

Helping shoppers obtain healthier diets and lifestyles is a major trend in the food industry and in public policy today. Using the capabilities within the SJU Peck Grocery App Dashboard identifying unduplicated reach with combinations of app functions, an Easy Nutrition Shopping App was hypothesized. It provided a total of seven services to assist a shopper in identifying and shopping for healthier products specific to his/her family needs. The provided functions for this customized app addressed the provision of nutrition information and the simplification of planning and shopping for the identified nutritious products. The seven functions listed below were selected on the SJU Peck Grocery App Dashboard as representative of app functions that could be used to construct an Easy Nutrition Shopping App. The remaining 13 functions were eliminated from consideration in this customized example.

**Easy Nutrition Shopping App Functions**
- Provide specific dietary recommendations for my family
- Provides nutrition details for specific products
- Create a shopping list before I go shopping
- Provides a shopping list for the ingredients in my recipe
- Help me locate specific products in the store
- Recommend substitute products
- Suggest the shortest route within the store for the shopping trip

This customized app was presented to the total sample as well as to several target markets to see where and how it resonated as a grocery shopping app supported by the shopper’s extreme interest (top box). The total sample had limited interest reaching 37% of all shoppers. The FUTURE segment had greater reach (53%) and anticipated wider use of the app features. The
Frequently Buy Groceries Online segment had significant response (68%) among just four features and was driven by high interest in nutrition information and dietary recommendations. The OPPORTUNITY segment was examined to see if a specialized app might draw their specific interest but found the opposite, very limited interest overall (10%).

Creating a Custom App: Easy Shopping Nutrition App
37% Reach in Total

- Provide a shopping list for ingredients for specific recipes
- Help me locate specific products within the store while I am shopping
- Provide nutrition details on specific products
- Recommend substitute products if the one I am looking for is unavailable
- Provide specific dietary recommendations for my family
- Suggest the shortest route within the store for my shopping trip
Creating a Custom App: 
**Easy Shopping Nutrition App**

**53% Reach in Digital *future***

- Provide a shopping list for ingredients for specific recipes
- Help me locate specific products within the store while I am shopping
- Provide nutrition details on specific products
- Recommend substitute products if the one I am looking for is unavailable
- Provide specific dietary recommendations for my family
- Suggest the shortest route within the store for my shopping trip

<table>
<thead>
<tr>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>9%</td>
<td>4%</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Creating a Custom App: 
**Easy Shopping Nutrition App**

**68% Reach Frequently Buy On-line**

- Provide specific dietary recommendations for my family
- Provide nutrition details on specific products
- Suggest the shortest route within the store for my shopping trip
- Create a shopping list before I go shopping

<table>
<thead>
<tr>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>47%</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Strong interest in Dietary Recs, Nutrition details, and shopping convenience*
Creating a Custom App: 
Easy Shopping Nutrition App 
10% Reach Social Opportunity

Retailer takeaway: In summary, as this customized example indicates, apps have very specific appeal (or lack of) within segments and can be effectively customized with specific functions to support retailer differentiation and deliver strategic growth.

BARRIERS TO GROCERY APP USE

Comparison of Digital Shopping Segments
The Peck Year One study identified barriers to grocery app use as both mechanical in nature, such as expectations for technical difficulties, and perceptual in nature, focused more on an expectation for inadequate time/value payoff. It seemed the shopper’s familiar and ingrained shopping routine was a high hurdle for the grocery apps to surmount. The Year One research anticipated split attitudes on the various proposed barriers and the Year Two research affirmed this.
RESPONDENT REPORTED BARRIERS TO USING GROCERY SHOPPING APPS:

**Mechanical Concerns:**
Shortens phone’s battery life  
Not confident store layout will be accurate  
Difficult to read information on display panel  
Over notification from retailer  
Frequency of updating  
Amount of memory space required  
Slow response time within the store’s environment  
App glitches and cumbersome navigation

**Perceptual Concerns:**
Time/value proposition is not adequate  
Doesn’t deliver sufficient dollar savings  
App is under promoted (lack of awareness)  
Doesn’t provide circular’s detail  
Smartphone coupons not welcomed at checkout  
Concern for smartphone theft  
Privacy intrusion  
Too many undesired requests (surveys, personal info, etc.)

Peck Year One research, 2013.

The FUTURE segment appeared to be quite experienced with app limitations but not deterred in using apps. The PRICE group had higher concerns for app mechanical issues. They also anticipated the most privacy intrusion and requests for surveys and personal information. The PRICE group was highest in questioning the time/value tradeoff provided by a grocery shopping app. The TOMORROW segment had concerns but not to the advanced degree indicated by the PRICE group and the FUTURE group. The OPPORTUNITY segment reported very low level of major concern for all barriers considered. This continues to reflect their disinterest in grocery shopping apps.

Ranking the top barriers identified with extreme concern (top box) by the FUTURE, TOMORROW, and PRICE segments it’s notable that the FUTURE and PRICE groups rate concerns higher and with significance versus the other segments. The digitally savvy FUTURE group ranks all the concerns reasonably high as it’s likely they’ve dealt with the issues first hand. Speaking from experience, technical concerns lead their list, and a negative experience with technical performance could discourage a FUTURE user to abandon the app. While concerned about privacy intrusion, they are not deterred as active digital users. The PRICE
group has the issues spread over a wider range and scores the concerns of over notification, privacy, and personal information requests as their major concerns, well above their concern for technical issues. The chart shows the lower concern of the TOMORROW segment for the issues presented. Privacy leads their list by several points, but with lower intensity.

**Retailer takeaways**: Concerns overall are somewhat important but not insurmountable. They are different and with different intensity across the digital shopping groups. Technical concerns are paramount for the digitally active FUTURE segment. Address technical issues before an app function is released. Focused customized apps require fewer functions which helps minimize technology underperformance.

The OPPORTUNITY group, active in social media, reports little interest in concerns, or interest in general, for grocery shopping apps.
### Percent Reporting A Big Concern that might stop me from using the app (top box)

by Digital Shopping Group *(range of 36-9% within groups)*

<table>
<thead>
<tr>
<th>%</th>
<th>FUTURE</th>
<th>TOMORROW</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>36%</td>
<td>Over notification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
<td></td>
<td>PRIVACY</td>
</tr>
<tr>
<td>32</td>
<td>Slow response time in-store</td>
<td>Personal info requests</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Memory demand large</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Glitches</td>
<td>Poor time/value</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>GLITCHES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Poor time/value</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Checkout staff unprepared</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Navigation awkward</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inadequate savings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small screen display</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Personal info requests</td>
<td>PRIVACY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over notification</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inaccurate store layout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Shortens battery life</td>
<td></td>
<td>Inadequate savings</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Increases mobile theft</td>
<td></td>
<td>Memory demand large</td>
</tr>
<tr>
<td>22</td>
<td>Updates too frequently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Not entire circular available</td>
<td>Over notification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Checkout staff unprepared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Poor time/value</td>
<td></td>
<td>Slow response time in-store</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Memory demand large</td>
<td>Checkout staff unprepared</td>
</tr>
<tr>
<td></td>
<td>Navigation awkward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Shortens battery life</td>
<td></td>
<td>Updates too frequently</td>
</tr>
<tr>
<td></td>
<td>Glitches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Personal info requests</td>
<td></td>
<td>Not entire circular available</td>
</tr>
<tr>
<td>16</td>
<td>Small screen display</td>
<td></td>
<td>Increases mobile theft</td>
</tr>
<tr>
<td>15</td>
<td>Slow response time in-store</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Inadequate savings</td>
<td></td>
<td>Inaccurate store layout</td>
</tr>
</tbody>
</table>

*Additional PRICE: 13% Inaccurate store layout, Not entire circular; 11% theft; 9% Update too frequently*
Privacy Concerns
Privacy concerns are real and complex. They are revealed in several ways within the study. As a concern or barrier, privacy intrusion rises to one of the top concerns but with subtle differences across segments. The FUTURE and PRICE groups rank “too many requests for surveys and personal information” as a higher concern accompanying privacy intrusion. Social media users, however, are less concerned about privacy versus the other digital shopping groups. Remaining shoppers are struggling with the tension of their preference for privacy and their desire to obtain savings, often obtained at the expense of sharing personal information or shopping behaviors. Privacy concerns are not discriminating across shopper’s basket size or their inclination to buy groceries on line, they differ by digital shopping profile.

The tension for privacy in a digital arena, as represented with app use, seems largest with the shopping segments most focused on price. Their concerns for privacy are compromised by provision of a discount. In essence they need to be strongly enticed to participate in the app by an incentive to “sell” their privacy compensating them for its loss and the retailer’s access. This is especially true since they are skeptical that digital participation in the path to purchase improves the ability to save money.

I Don’t Like it When Websites Ask me for Personal Information:
This best describes me…

Chart above shows responses of “A Lot” and “Some”, responses of “Only a Little” or “Not at All” are not graphed. Total =100%
Willing to Exchange Personal Information to for a Discount on a Product I Want:
This best describes me…

![Chart showing responses](chart1.png)

Chart above shows responses of “A Lot” and “Some”, responses of “Only a Little” or “Not at All” are not graphed. Total =100%

How much, at all, do you think the internet and mobile devices have improved your ability to save money…

![Chart showing responses](chart2.png)

Chart above shows responses of “A Lot” and “Some”, response of “Only a Little” or “Not at All” are not graphed. Total =100%
Shopper privacy concerns regarding app usage need further exploration. There appears to be a transfer of accountability. The shopper is aware their privacy is compromised but rather than withhold it, and loose access to the desired discounts, information, and convenience the digital experience provides, they project the accountability onto the retailer/intermediary who captures their data. They believe these collecting agencies should be held accountable for their use and protection of the individual’s private data. This perspective holds important insights to the shopper’s expectations for consumer protection and industry regulation, as well as their expectation for the structure and strength of privacy policies presented to them by the private firms they engage with, such as their grocery retailer.

CONCLUDING THOUGHTS

Putting the hypotheses of the Peck Year One research to test, it’s apparent that this nascent elusive exploding field of grocery mobile retailing and m-assisted shopping holds great promise. Written two years ago, the original Peck assessment still rings true:

Today’s reach of mobile smartphone technology and the personal and commercial blend of social media networks permit instantaneous consumer interactivity on grocery products, pricing and information access. This potential for consumers to access information, savings, and convenience through a mobile app enables a dramatic transformation in food shopping on a global basis. A revolution well underway and continually morphing, new grocery shopping behaviors represent both a challenge to comprehend and an opportunity to manage for increasing revenue and competitive advantage. Understanding consumer grocery shopping behavior in the mobile age requires fresh approaches to defining the consumer’s grocery shopping experience, motivation, and value equation.

A key finding in the Peck Year Two research is that shopper segmentation, especially digital shopper segmentation, really matters and it’s attainable. If you want to be successful in reaching specific segments of your shoppers, there are different things you can offer them that connect with their particular interests. Apps perform better when customized and simplified, efficiently streamlining shopper use and retailer maintenance. The customization builds brand and deepens shopper engagement. It also leaves the shopper with a sense of control in the relationship they are building with their store.
While shoppers are still transferring traditional shopping behavior onto digital platforms for execution, it is also evident that the most digitally savvy shoppers, who also represent the largest shopping baskets and lower price sensitivity, are extremely interested in grocery app functions. They are ready to graduate to more solution focused functions. This FUTURE group is technically experienced, comfortable with online shopping, and well aware of app underperformance. They are a desired core shopper group and one worth pursuit.

Likewise customized app development, possible with the SJU Peck Grocery App Dashboard, pinpoints app function appeal and anticipates a segment’s level of interest. In the research, heavy social media users, titled OPPORTUNITY, are less interested in grocery apps and need stronger economic enticements. This information allows a retailer to customize type of app functions offered and to more optimally allocate resources for app development and promotion.

App customization, personalized app functions, and increased access to tracking services all are on a converging path with an ever present shopper concern for privacy. Understanding where this intersection occurs in different shopper segments, and how the shoppers’ expectations for their sharing, and the retailers using and protecting their personal data, will be critical to retaining the shopper’s trust.

Grocery shopping apps and shopper connections are possible on an intimate level. Mobile-assisted retailing need not be mass marketing, but rather high precision targeting to achieve strategic growth and brand enhancement.
APPENDIX A: Methodology with IRI DigitaLink™ Segments

Digital Shopper Segments

Examining the six IRI DigitaLink™ segments in the sample and their characteristics and behaviors, widely different digital profiles emerge for each segment. Applying these IRI DigitaLink™ profiles to the Peck Research sample identifies significantly different interests in grocery shopping apps and concerns regarding their use for the various segments. The IRI DigitaLink™ segments are defined by IRI in Appendix B with their representation in the general population. Within the Peck Research sample, screened for smartphone ownership and app awareness, the digital groups are represented in much stronger numbers. The comparison of the distribution of DigitaLink™ categories in IRI’s general population of grocery shoppers versus the Peck Research sample are below:

SIZE OF IRI DigitaLink™ SEGMENT OF PRIMARY GROCERY SHOPPERS WITHIN THE GENERAL POPULATION & PECK SAMPLE

<table>
<thead>
<tr>
<th>IRI DigitaLink™ Segments:</th>
<th>IRI General Population as % of Sample:</th>
<th>% Represented in PECK Sample: Smartphone Users &amp; App Aware</th>
<th>Change in PECK Sample versus IRI Sample:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TECHNOPHOBE</td>
<td>21%</td>
<td>7%</td>
<td>Shrinks by two-thirds</td>
</tr>
<tr>
<td>DIGITAL ENTHUSIAST</td>
<td>13%</td>
<td>26%</td>
<td>Doubles</td>
</tr>
<tr>
<td>DIGITAL CORE</td>
<td>12%</td>
<td>21%</td>
<td>Nearly doubles</td>
</tr>
<tr>
<td>WIRED FOR WORK</td>
<td>16%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>SHOW ME THE MONEY</td>
<td>23%</td>
<td>16</td>
<td>Shrink by one-third</td>
</tr>
<tr>
<td>SOCIALIZERS</td>
<td>15%</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>

By definition, The Peck sample screened for smartphone ownership and app familiarity has a small representation of the Technophobe category. This group, based on attitude and behavior towards technology, is not a target for grocery apps and is not discussed further in this report.
## Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps

### APPENDIX B: IRI DigitaLink™ Segment Characteristics in the general population (March 2014)

<table>
<thead>
<tr>
<th>Segment Size</th>
<th>Digitize Me! Enthusiasts</th>
<th>Digitize Me! Core</th>
<th>Show Me The Honey</th>
<th>Wired for Work</th>
<th>Socializers</th>
<th>Technophobes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age</td>
<td>36</td>
<td>43</td>
<td>58</td>
<td>39</td>
<td>43</td>
<td>65</td>
</tr>
<tr>
<td>Median Income</td>
<td>$54,000</td>
<td>$56,000</td>
<td>$54,000</td>
<td>$56,000</td>
<td>$46,000</td>
<td>$45,000</td>
</tr>
<tr>
<td>Annual CPG Online $ Spending</td>
<td>$562</td>
<td>$208</td>
<td>$106</td>
<td>$135</td>
<td>$66</td>
<td>$34</td>
</tr>
</tbody>
</table>

### Motivations and Barriers

<table>
<thead>
<tr>
<th>Digitize Me! Enthusiasts</th>
<th>Digitize Me! Core</th>
<th>Show Me The Honey</th>
<th>Wired for Work</th>
<th>Socializers</th>
<th>Technophobes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowered by digital devices for sharing, working, learning, social interaction, money and time saving</td>
<td>Empowered by digital devices, but feel a little overloaded</td>
<td>More willing to share personal information online</td>
<td>Digital devices used for financial planning and saving money on purchases</td>
<td>Unwilling to share personal information online</td>
<td>More willing to share personal information online</td>
</tr>
<tr>
<td>More willing to share personal information online</td>
<td>Need some tech assistance</td>
<td>Empowered by digital devices, especially for working and networking</td>
<td>Fun to be connected with people online</td>
<td>Need some tech assistance</td>
<td>Little feeling of empowerment from digital devices</td>
</tr>
<tr>
<td>Empowerment and harmony</td>
<td>Unwilling to share personal information online</td>
<td>More willing to share personal information online</td>
<td>Need some tech assistance</td>
<td>Little feeling of empowerment from digital devices</td>
<td>Unwilling to share personal information online</td>
</tr>
</tbody>
</table>

### Online Activities

<table>
<thead>
<tr>
<th>Digitize Me! Enthusiasts</th>
<th>Digitize Me! Core</th>
<th>Show Me The Honey</th>
<th>Wired for Work</th>
<th>Socializers</th>
<th>Technophobes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. 35 hrs. online weekly</td>
<td>Avg. 29 hrs. online weekly</td>
<td>Avg. 24 hrs. online weekly</td>
<td>Avg. 31 hrs. online weekly</td>
<td>Avg. 25 hrs. online weekly</td>
<td>Avg. 16 hrs. online weekly</td>
</tr>
<tr>
<td>Multiple digital devices owned and take advantage of them for social networking, shopping, entertainment and working</td>
<td>Rely on digital devices and take advantage of them for social networking, shopping, entertainment and working</td>
<td>Search for medications, financial and product information, coupon and price information online</td>
<td>Rely on digital devices, especially for social networking</td>
<td>Use digital devices primarily for social interactions</td>
<td>Online activities primarily limited to sending/receiving emails and searching for information</td>
</tr>
<tr>
<td>Purchase grocery online and follow brands via social media</td>
<td>Buy groceries and follow brands online</td>
<td>Social interactions are primarily face-to-face</td>
<td>Occasionally shop for groceries online</td>
<td>May follow brands via social media</td>
<td>Rarely shop for groceries online</td>
</tr>
</tbody>
</table>
APPENDIX C: Extreme Interest in App Functions by Digital Segment

FUTURE Segment

Extremely Interested in Using a Grocery Shopping App that could...

% of Respondents Extremely Interested in Each App Function (top box of 7), n=165
TOMORROW Segment

Extremely Interested in Using a Grocery Shopping App that could…

% of Respondents Extremely Interested in Each App Function (top box of 7), n=100
PRICE Segment

Extremely Interested in Using a Grocery Shopping App that could…

% of Respondents Extremely Interested in Each App Function (top box of 7), n=107
OPPORTUNITY Segment

Extremely Interested in Using a Grocery Shopping App that could…

% of Respondents Extremely Interested in Each App Function (top box of 7), n=101
### APPENDIX D: SJU Peck Grocery App Dashboard

Scores Total Unduplicated Reach and Frequency (TURF)

| Select Respondents: | Add a shopping list before going shopping (1) | Add tax and tip before we go shopping (2) | Help me locate specific products within the store while I am shopping (3) | Provide my weekly shopping list (4) | Start and re-order my items while I am shopping (5) | Recommend substitutions if I am having trouble finding an item (6) | Recommend a replacement if I am shopping (7) | Provide a shopping list for ingredients for a specific recipe (8) | Provide a live overview of customer service while I am shopping (9) | Provide nutrition labels on specific products (10) | Identify prices and special sales offers (11) | Provide information on weekly sales (12) | Track the amounts I am spending while I am shopping (13) | Provide exclusive deals for using the app (14) | Keep track of my past shopping history and product ratings (15) | Offer personalized reminders for approaching birthdays, holidays, anniversaries (16) | Track my total rewards points and incentive programs (17) |
|---------------------|---------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Clear to Include   |                                             |                                          |                                                                                  |                                  |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |
| Clear to Exclude   |                                             |                                          |                                                                                  |                                  |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |
| TURF RESULTS        |                                             |                                          |                                                                                  |                                  |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |                                                 |
## APPENDIX E: Grocery App Interest

Summary Table of Top Box (7) Responses (7= “Extremely Interested”; 1= “Not at All Interested”) Base: Knows What An App Is (Q9)

<table>
<thead>
<tr>
<th>DIGITAL SEGMENTS</th>
<th>TOTAL</th>
<th>Digitize Me: Core</th>
<th>Digitize Me: Enthusiasts</th>
<th>Wired For Work</th>
<th>Show Me The Money</th>
<th>Socializers</th>
<th>Techno-phobes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[A]</td>
<td>[B]</td>
<td>[C]</td>
<td>[D]</td>
<td>[E]</td>
<td>[F]</td>
<td>[G]</td>
</tr>
<tr>
<td>Identify coupons and special sales offers</td>
<td>279</td>
<td>52</td>
<td>110</td>
<td>54</td>
<td>39</td>
<td>17</td>
<td>7</td>
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<td>42%</td>
<td>38%</td>
<td>67%</td>
<td>54%</td>
<td>36%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Provide exclusive discounts to me for using the app</td>
<td>256</td>
<td>38</td>
<td>105</td>
<td>48</td>
<td>37</td>
<td>18</td>
<td>10</td>
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<td>28%</td>
<td>64%</td>
<td>48%</td>
<td>35%</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>Provide information on weekly sales</td>
<td>238</td>
<td>39</td>
<td>100</td>
<td>39</td>
<td>39</td>
<td>15</td>
<td>6</td>
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<td>29%</td>
<td>61%</td>
<td>39%</td>
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<tr>
<td>Track my retail loyalty points and incentive programs</td>
<td>201</td>
<td>28</td>
<td>93</td>
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<td>56%</td>
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<tr>
<td>Provide my weekly sales circular</td>
<td>198</td>
<td>32</td>
<td>93</td>
<td>34</td>
<td>25</td>
<td>11</td>
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<td>34%</td>
<td>23%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>Create a shopping list before I go shopping</td>
<td>189</td>
<td>31</td>
<td>88</td>
<td>30</td>
<td>26</td>
<td>9</td>
<td>5</td>
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<td>53%</td>
<td>30%</td>
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<td>10%</td>
</tr>
<tr>
<td>Track the amount I am spending while I'm shopping</td>
<td>186</td>
<td>23</td>
<td>80</td>
<td>36</td>
<td>27</td>
<td>12</td>
<td>8</td>
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<td>17%</td>
<td>48%</td>
<td>36%</td>
<td>25%</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>Provide a price comparison among selected products</td>
<td>159</td>
<td>32</td>
<td>80</td>
<td>28</td>
<td>15</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>FG</td>
<td>24%</td>
<td>24%</td>
<td>48%</td>
<td>28%</td>
<td>14%</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps - 45 -
Scan and checkout my items while I am shopping  | 153 | 18 | 80 | 24 | 19 | 9 | 3  
23% | 13% | 48% | 24% | 18% | 9% | 6%  
BDEFG | BFG | Gf

Provide a shopping list for ingredients for specific recipes  | 140 | 23 | 72 | 20 | 16 | 5 | 4  
21% | 17% | 44% | 20% | 15% | 5% | 8%  
Fg | BDEFG | FG | F

Help me locate specific products within the store while I am shopping  | 134 | 21 | 72 | 21 | 12 | 6 | 2  
20% | 15% | 44% | 21% | 11% | 6% | 4%  
FG | BDEFG | FG | g

Provide nutrition details on specific products  | 122 | 17 | 70 | 20 | 12 | 2 | 1  
19% | 13% | 42% | 20% | 11% | 2% | 2%  
FG | BDEFG | FG | FG

Recommend substitute products if the one I am looking for is unavailable  | 121 | 19 | 64 | 20 | 15 | 2 | 1  
18% | 14% | 39% | 20% | 14% | 2% | 2%  
FG | BDEFG | FG | FG

Make recommendations to me based on my past shopping history and product interests  | 117 | 16 | 64 | 22 | 10 | 3 | 2  
18% | 12% | 39% | 22% | 9% | 3% | 4%  
Fg | BDEFG | BEFG | f

Keep track of my past shopping history  | 114 | 22 | 61 | 15 | 11 | 3 | 2  
17% | 16% | 37% | 15% | 10% | 3% | 4%  
FG | BDEFG | FG | F

Offer personalized reminders for approaching birthdays, holidays, anniversaries  | 113 | 17 | 63 | 22 | 7 | 3 | 1  
17% | 13% | 38% | 22% | 7% | 3% | 2%  
FG | BDEFG | EFGb

Provide specific dietary recommendations for my family  | 110 | 14 | 67 | 17 | 10 | - | 2  
17% | 10% | 41% | 17% | 9% | - | 4%  
F | BDEFG | FG | F

Recommend recipes before I go shopping  | 109 | 17 | 62 | 14 | 11 | 3 | 2  
Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps - 46 -
<table>
<thead>
<tr>
<th></th>
<th>17%</th>
<th>13%</th>
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<th>14%</th>
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<th>3%</th>
<th>4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggest the shortest route within the store for my shopping trip</td>
<td>FG</td>
<td>BDEFG</td>
<td>FG</td>
<td>F</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>105</td>
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<td>14%</td>
<td>11%</td>
<td>2%</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Provide a link to store's customer service while shopping</td>
<td>F</td>
<td>BDEFG</td>
<td>FG</td>
<td>Fg</td>
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</tr>
</tbody>
</table>

St. Joseph University ** Grocery App Study **
Apr 22 2014

Columns tested: [B] thru [G];
Uppercase = 95% confidence level
Lowercase = 90% confidence level
### APPENDIX F: Grocery App Concern

Summary Table of Top Box (7) Responses (7="Big Concern"; 1="Not a Concern at All")
BASE: KNOWS WHAT AN APP IS (Q9)

<table>
<thead>
<tr>
<th>Concern</th>
<th>TOTAL</th>
<th>Digitize Me: Core</th>
<th>Digitize Me: Enthusiasts</th>
<th>Wired For Work</th>
<th>Show Me The Money</th>
<th>Socializers</th>
<th>Technophobes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The app would generate too many notification messages from the retailers</td>
<td>[A]</td>
<td>[B]</td>
<td>[C]</td>
<td>[D]</td>
<td>[E]</td>
<td>[F]</td>
<td>[G]</td>
</tr>
<tr>
<td>[A]</td>
<td>[B]</td>
<td>[C]</td>
<td>[D]</td>
<td>[E]</td>
<td>[F]</td>
<td>[G]</td>
<td></td>
</tr>
<tr>
<td>The app is likely to result in privacy intrusion</td>
<td>161</td>
<td>29</td>
<td>43</td>
<td>21</td>
<td>38</td>
<td>14</td>
<td>16</td>
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<td>21%</td>
<td>36%</td>
<td>14%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>I will receive too many requests for surveys, personal information &amp; such</td>
<td>159</td>
<td>20</td>
<td>46</td>
<td>26</td>
<td>36</td>
<td>14</td>
<td>17</td>
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<td>26%</td>
<td>34%</td>
<td>14%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>The app would require too much memory space on my phone or tablet</td>
<td>142</td>
<td>20</td>
<td>43</td>
<td>17</td>
<td>34</td>
<td>10</td>
<td>18</td>
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<td>17%</td>
<td>32%</td>
<td>10%</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>The app would have too many glitches</td>
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<td>21</td>
<td>52</td>
<td>19</td>
<td>25</td>
<td>12</td>
<td>11</td>
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<td>32%</td>
<td>19%</td>
<td>23%</td>
<td>12%</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>The app might not offer enough time value for me to use it</td>
<td>140</td>
<td>20</td>
<td>48</td>
<td>18</td>
<td>30</td>
<td>10</td>
<td>14</td>
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<td>18%</td>
<td>28%</td>
<td>10%</td>
<td>29%</td>
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<tr>
<td>The app would not respond quickly within the store's environment</td>
<td>128</td>
<td>17</td>
<td>44</td>
<td>20</td>
<td>31</td>
<td>4</td>
<td>12</td>
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<td>20%</td>
<td>29%</td>
<td>4%</td>
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<tr>
<td>The app would be cumbersome to navigate</td>
<td>125</td>
<td>19</td>
<td>52</td>
<td>15</td>
<td>21</td>
<td>7</td>
<td>11</td>
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</tbody>
</table>

Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps  
- 48 -
<table>
<thead>
<tr>
<th>Ruined experience</th>
<th>f</th>
<th>BDEF</th>
<th>f</th>
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<tr>
<td>Using a grocery store app would seriously shorten my battery life</td>
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<td>20</td>
<td>44</td>
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<tr>
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<td>15%</td>
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<td>19%</td>
<td>22%</td>
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<tr>
<td>The checkout personnel may not like dealing with digital coupons generated by the app</td>
<td>121</td>
<td>16</td>
<td>42</td>
<td>18</td>
<td>29</td>
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<td>12%</td>
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<td>18%</td>
<td>27%</td>
</tr>
<tr>
<td>The app will not generate enough dollar savings</td>
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<td>17</td>
<td>44</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
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<td>13%</td>
<td>27%</td>
<td>21%</td>
<td>19%</td>
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<tr>
<td>It would be difficult to read information on the display panel</td>
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<td>11%</td>
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<tr>
<td>The app might not be accurate with respect to store layout and product location</td>
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<td>45</td>
<td>16</td>
<td>22</td>
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<td>10%</td>
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<tr>
<td>Using the app in the store is likely to increase mobile phone theft</td>
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<td>13%</td>
<td>14%</td>
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<tr>
<td>The app would be updating too frequently</td>
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<td>9</td>
<td>38</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
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<td>7%</td>
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<td>11%</td>
<td>16%</td>
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<tr>
<td>The app is not likely to provide the store’s full weekly circular sales circular</td>
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<td>10</td>
<td>36</td>
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<td>19</td>
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</table>

St. Joseph University **
Grocery App Study ** Apr 22 2014

Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps

- 49 -
Columns tested: [B] thru [G];
Uppercase = 95% confidence level
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Digital Grocery Commerce: Insights for Enhancing Consumer Connection with Grocery Shopping Apps

- 50 -
Gerald E. Peck Fellowship

In 1986, the National-American Wholesale Grocers’ Association (NAWGA) established an endowment in recognition of the achievements of retiring NAWGA President Gerald Peck to support teaching and research in food wholesale management. The Peck Fellowship has evolved to a series of three year appointments of Food Marketing Professors from Saint Joseph’s University in Philadelphia, PA, to contribute to the understanding of issues relating to food retailing and foodservice through research.

The current Peck Fellow is Dr. Nancy Childs, Professor of Food Marketing and National Representative for Food Marketing and Retailing Issues on the USDA Secretary's NAREEE Advisory Board. Her research appointment is with the Food Marketing Institute for three years concluding 2015.

She focuses on digital grocery commerce. In particular her year one work focused on the potential for grocery shopping apps and mobile-assisted grocery shopping. The work uncovered grocery app functions and barriers critical to shopper success with the smartphone technology. She also examined the evolution of new growth opportunities with m-assisted grocery shopping apps from an innovation lens. The investigation concluded a sustaining innovation approach will advantage retailers. Her Year One report, along with this Year Two report, is available for download from the FMI Store at www.fmi.org.