

3RD ANNUAL  
**GROCERY  
TECH TRENDS  
STUDY  
2018**



# Digital Transformation Accelerates

Grocers embrace the evolving role of technology  
as a tool that optimizes decision making,  
learns as it goes, recommends next-best actions  
and reacts faster than ever before

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## EDITOR'S NOTE

# Why Digital Transformation Matters



**The role played by technology** in the grocer's digital transformation is evolving and accelerating. It is moving beyond its traditional role as an underlying support system for effectively managing high-volume, large-scale, high-revenue businesses.

In the modern grocery enterprise, technology has evolved into an advanced tool that optimizes decision making, learns as it goes, recommends

next-best-actions, and moves at a faster speed than ever before.

Unlike prior years, when technology was viewed as a necessary evil, grocers are embracing tech investment today as a hedge against fast-moving competitors and a catalyst for growing revenue and earning the loyalty of omnichannel shoppers.

A big reason for the embrace of technology today is the growing maturity of off-the-shelf solutions, especially in such areas as merchandise management, the supply chain and labor management. Another reason is that cloud options offer grocers a new delivery model that can be less expensive and less burdensome to deploy for the IT department.

However, the biggest reason for the embrace of technology is that omnichannel and in-store technologies are proven tools to drive new revenue and, on the flipside, protect revenue from going to innovative competitors.

This is the third annual Grocery Tech Trends Study, created in collaboration between *RIS News* and *Progressive Grocer*, and once again we benchmark the status and future investment plans for 59 essential technology grocery solutions. By looking at the data in the study about up-to-date technology in place, grocers can compare the status of their tech stack against their competitors. Just as importantly, they can also look at the investment data for all 59 solutions and determine if their tech stacks are ahead of the competition or falling behind. (See charts at right for who responded in the study.)

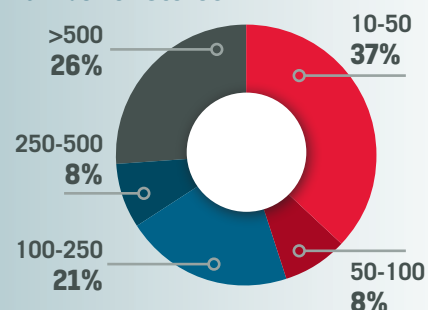
Like last year, the major theme that emerged from the findings is the grocer's embrace of digital transformation, a term that refers to a large multi-phase, multi-year process. Although much work has already been done, much more work lies ahead as grocers seek to grow their businesses in a highly competitive environment and meet the rising expectations of their customers.

*Joe Skorupa*

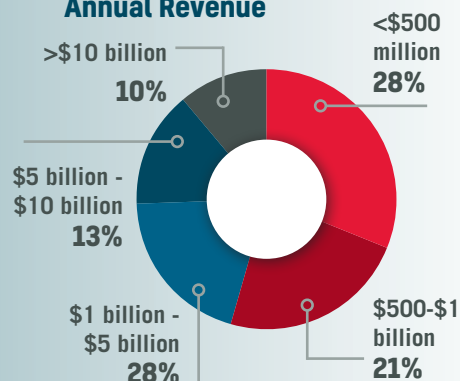
**Joe Skorupa**  
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## Methodology

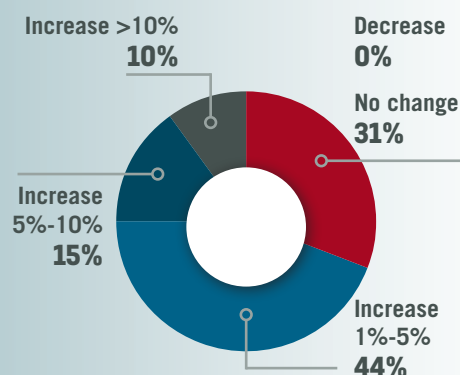
**FIGURE 1**  
**Number of Stores**



**FIGURE 2**  
**Annual Revenue**



**FIGURE 3**  
**Year-Over-Year Change in Revenue**





## Digital Transformation Accelerates

### GROCERS EMBRACE A NEW OPENNESS TOWARD ADOPTING ADVANCED SOLUTIONS AND INNOVATIVE TECHNOLOGIES AT AN ACCELERATING PACE

**You don't window shop at a supermarket.** You go with an I-need-it-right-now mission. To effectively serve laser-focused shoppers, supermarkets need to get it right – right products, right prices and right store experiences.

Each of these goals is heavily dependent on strong technology that enables grocery chains to succeed. The role of technology is critical now and its influence is growing, especially as grocers roll out new services that touch customers in the store and, in some cases, extend all the way to the shopper's home.

Moreover, the role played by technology is evolving and accelerating. It is moving beyond the traditional role of managing high-volume, large-scale, high-revenue businesses. In the modern enterprise, technology is becoming an advanced tool that learns as it goes, recommends next-best-actions, and moves at the speed needed to respond to rapidly developing shopper trends, competitive forces, and unforeseen opportunities that suddenly emerge.

In the third annual Grocery Tech Trends Study, created in collaboration between *RIS News* and *Progressive Grocer*, the evolution of the technology landscape in grocery retailing is examined in detail and next steps identified that will help grocers set strategy for 2019, close gaps to avoid falling behind, and jump-start competitive advantages to consolidate leadership and seize new opportunities.

**The major finding in the study is that grocers clearly recognize the importance of digital transformation as critical to the financial health of their businesses and are adopting essential technologies at an accelerating pace.**

#### 2018 Challenges and Opportunities

Repeating its number one position on the top business opportunities list that are driving tech investments is **advancing digital capabilities (chosen by 51%)**. (See Figure 1.)

The umbrella term 'digital opportunities' specifically refers to a grocer's web presence and online sales at a bare minimum. It also includes such capabilities and technologies as mobile apps, social media management, WiFi in stores for customers, shopper tracking in stores, mobile devices used by associates, shifting to the cloud and more.

The pursuit of upgrading and expanding stores also re-

FIGURE 1

#### Top business opportunities driving tech investments in 2019

Advancing digital capabilities	51%
Store upgrading & growth	46%
Analytics-driven decision making	41%
Developing personalized marketing capabilities	38%
Developing mobile capabilities	31%
Localized products/assortments	26%
New store formats	26%
Subscription ordering for home delivery	26%
Meal kit services	23%
New/proprietary product development	21%

FIGURE 2

#### Top challenges driving tech investments in 2019

Employee engagement	47%
Discounting/price competition	34%
Cyber security	34%
Customer data security	24%
Amazon (innovations, blockbuster deals, etc.)	24%
Food safety	24%
Lack of senior-management vision	21%

peated its position on the opportunities list, where it appears in second place.

However, several big jumps on the list are worth calling out. The two big movers are **analytics-driven decision-making**, which jumped up to third place (chosen by 41% of grocers) from seventh place last year (when it was chosen by just 27%) and **developing personalized marketing capabilities**, which jumped to fourth place (chosen by 38%) compared to ninth last year (21%).

Looking at this year's top challenges list we see much more volatility than on the opportunities list. In a strong economy with low unemployment the labor pool tightens up and this puts a squeeze on a grocer's ability to keep staff and make new hires. As a result, **employee engagement (47%) is in the top spot on the challenges list.**

Cyber security repeats the second-place ranking it

# 2018 Grocery Tech Trends Study



earned in 2017, however this year it tied with **discounting/price competition**, which jumped from sixth place last year. (See Figure 2.)

Interestingly, the threat of global grocers entering the U.S. market, which was serious enough in 2017 to place third on the challenges list, has been dropped as a big concern this year.

**Seven key strategic recommendations emerge from the 2019 opportunities and challenges lists that grocers should focus on: digital transformation, analytics-driven decision making, personalized marketing, cyber security, employee engagement, and price optimization.**

## Top Technology Solutions for 2019

In last year's study, we saw a surge in POS investment activity set to begin within 12 months and this year's study confirms this prediction was on target. We see this in the numbers recorded for POS hardware currently up-to-date, which rose to 38% compared to 33% last year. This indicates some of the planned work by grocers was actually

completed. The number for up-to-date POS software rose to 38% compared to 31% last year and for POS peripherals it rose to 45% compared to 33% last year. (See Figure 3.)

These numbers do not account for all the upgrade work that was planned in last year's report. To account for the rest, we should look at the numbers for work begun but still not completed. Here we see the number for POS hardware jumps to 21% this year versus 12% last year. For POS software it jumps to 21% versus 12% last year, and for POS peripherals it jumps to 21% versus 12% last year.

With so much POS work completed or underway it is logical to assume that future POS investments will tail off and the numbers confirm this. The numbers for grocers planning to upgrade POS software within two years is 29%, for POS hardware it is 26%, and for POS peripherals it is 19%. These numbers still show a high degree of future activity.

Other **in-store technologies that show high levels of upgrade activity within two years include: location-based marketing to power personalization (34%), shopper tracking (34%), click-and-collect management**

FIGURE 3

## Status of in-store technologies

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
POS peripherals	45%	21%	16%	3%	16%
Delivery of web orders management	41%	10%	8%	13%	28%
POS software	38%	21%	21%	8%	13%
POS hardware	38%	21%	18%	8%	15%
WiFi for customers	36%	23%	10%	5%	26%
Mobile devices for managers	33%	18%	21%	5%	23%
Shopper tracking	32%	13%	18%	16%	21%
Real-time store monitoring of KPIs	28%	10%	15%	10%	36%
Self-checkout terminals	21%	13%	23%	5%	38%
Click-and-collect management	18%	21%	18%	10%	33%
Location-based marketing	13%	13%	16%	18%	39%
Self-shopping (scan and bag)	8%	18%	10%	10%	54%

FIGURE 4

## Status of merchandise management technologies

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
Item master data management	42%	16%	21%	0%	21%
Category management	41%	26%	5%	8%	21%
SKU/product management	41%	23%	5%	8%	23%
Allocation	39%	18%	3%	5%	34%
Price management	39%	21%	11%	5%	24%
Assortment planning	38%	18%	5%	8%	31%
New product/private label development	38%	23%	8%	0%	31%
Replenishment	36%	28%	8%	0%	28%
Trade promotion management	33%	23%	5%	3%	36%
Space planning (planograms)	31%	33%	3%	0%	33%
Product lifecycle management	31%	21%	8%	5%	36%
Enterprise resource planning (ERP)	29%	18%	5%	5%	42%

# 2018 Grocery Tech Trends Study



(28%), self-checkout terminals (28%), and mobile devices for managers (26%).

Many of the merchandise management applications tracked in the study have reached a solid level of technological maturity and data in the study shows grocers have invested steadily in them over time. We see this in the high numbers recorded for grocers who have up-to-date merchandise management applications in place. (See Figure 4.)

For the 12 merchandise management applications tracked in the study, the numbers recorded for up-to-date technology in place are between 29% and 42%, which is on the high end of the range. This makes merchandise management the second most up-to-date technology group in the study.

Since we uncovered a few strong numbers for planned investment in merchandise management solutions in last year's study, we see correspondingly high numbers for upgrade work that was started but not yet finished in this year's study. This group includes space planning (33%), replenishment (28%), and category management (26%).

Looking ahead 12 months, **the merchandise management solution with the strongest planned investment level is item master management, where 21% say they will begin an upgrade in 2019.**

Another area of technology that shows steady investment by grocers is in the supply chain. All of the solutions in this group fall into the mature category as measured by up-to-date technology in place. The range of numbers runs from 44% to 38%, which makes it by far the most up-to-date group in the study. (See Figure 5.)

That said, there is still quite a bit of supply chain work that has been started but not yet finished, such as in real-time inventory management (26%) and order management (23%). Looking ahead, **warehouse/DC management shows the highest level of investment interest over the next two years at 21%.**

**FIGURE 6**  
**Status of analytic technologies**

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
Price optimization	42%	13%	13%	5%	26%
Market basket analysis	36%	23%	23%	5%	13%
Competitive analysis	36%	13%	21%	5%	26%
Campaign analysis and forecasting	36%	18%	13%	8%	26%
Promotion optimization	28%	26%	13%	5%	28%
Predictive analytics	26%	26%	18%	8%	21%
In-store shopper tracking analytics	26%	18%	21%	5%	31%
Space optimization	24%	18%	18%	5%	34%
Machine learning/Artificial intelligence	15%	15%	15%	8%	46%

Last year, grocers indicated they needed to close a gap in their analytic capabilities and forecast big plans for upgrading. Data in this year's report confirms they have carried out these plans. (See Figure 6.)

For example, when looking at up-to-date technology in place, machine learning/artificial intelligence jumped to 15% versus 8% last year. Other solutions where grocers achieved up-to-date technology status include: predictive analytics (26% this year versus 8% last year), space optimization (24% this year versus 14% last year), campaign analysis and forecasting (36% this year versus 22% last year), and market basket analysis (36% this year versus 10% last year).

**Analytic solutions that show strong investment interest within two years include market basket analysis (28%), competitive analysis (26%), in-store shopper tracking analytics (26%), and predictive analytics (26%).**

Today's tight job market has inspired grocers to follow through on investment plans for labor and workforce solutions predicted in last year's report. (See Figure 7.)

By checking the numbers for up-to-date technology in place we see that employee engagement management and monitoring, perhaps the most important solution in a tight labor market, jumped to 26% this year versus 16% last year. Other solutions making big jumps in up-to-date status include: recruitment and onboarding (39% this year

**FIGURE 5**  
**Status of supply chain technologies**

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
Order management	44%	23%	10%	3%	21%
Transportation management	41%	15%	10%	0%	33%
Warehouse/DC management	39%	16%	16%	5%	24%
Logistics	39%	18%	11%	5%	26%
Fulfillment	39%	16%	13%	0%	32%
Real-time inventory management	38%	26%	10%	5%	21%
Sourcing	38%	13%	13%	0%	36%



# 2018 Grocery Tech Trends Study



versus 22% last year), and human resources and benefits (46% this year versus 29% last year).

**Labor and workforce technologies that show strong levels of planned investment in 2019 include human resources and benefits (28%) and labor scheduling (20%).**

Just about every solution in the online tech group shows big year-over-year gains compared to last year in the up-to-date technology status (See Figure 8.). The biggest movers include: community (42% this year versus 18% last year), digital coupons (42% this year versus 19% last year), social media marketing (42% this year versus 27% last year), content management/repository (34% this year versus 17% last year), and remarketing (26% this year versus 10% last year).

**The top website and digital technology solutions**

**FIGURE 8**

## Status of website/digital technologies

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
Community	42%	13%	16%	0%	29%
Digital coupons	42%	16%	26%	3%	13%
Social media marketing	42%	26%	5%	11%	16%
Product/catalog management	34%	29%	16%	3%	18%
Customer reviews/ratings	34%	29%	11%	8%	18%
Content management/repository	34%	18%	24%	3%	21%
E-commerce platform	32%	24%	24%	5%	16%
Product recommendations	29%	34%	3%	5%	29%
Remarketing	26%	29%	8%	3%	34%
CRM/personalization	24%	18%	24%	11%	24%
Chatbots	11%	21%	24%	11%	34%

that show strong levels of investment for next year are: CRM/personalization (35%), chatbots (35%), digital coupons (29%), and e-commerce platforms (29%).

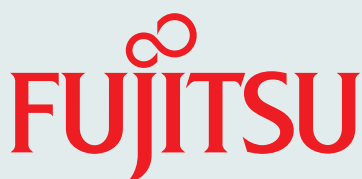
The investment numbers targeted for website and digital technology solutions implementations are the highest of any group tracked in the study and for good reason. Digital sales for grocers are booming. More than a third of grocers (36%) say online sales represent more than 10% of sales and 13% say it accounts for more than 15% of sales.

As grocers embark on large-scale, multi-year transformation projects they are **investing in a well-defined group of solutions that will increase their omnichannel capabilities, drive new business opportunities, and meet the expectations of increasingly demanding customers. RIS**

**FIGURE 7**

## Status of labor/workforce technologies

	Up to date	Started major upgrade	Will start upgrade within 12 months	Will start upgrade within 12-24 months	No plans
Labor scheduling	56%	13%	10%	10%	10%
Human resources and benefits	46%	15%	18%	8%	13%
Education and training	39%	34%	5%	8%	13%
Recruitment and on-boarding	39%	26%	8%	11%	16%
Task management	35%	22%	14%	5%	24%
Employee engagement management	26%	26%	5%	8%	34%
Mobile workforce and/or HR applications	24%	26%	8%	13%	29%
Real-time store/employee monitoring	24%	21%	11%	11%	34%



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