

The future of retail technology—health data, hyper-personalized purchasing

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Devices like these could become an even bigger part of shopping in the near future. Credit: University of South Carolina

Imagine going shopping and having your phone or fitness tracker make product recommendations for you based on your breath or the current physical state of your body.

It is not science fiction. It's the future of retailing and health care digitization, according to researchers at University of South Carolina's College of Hospitality, Retail and Sport Management. In a new study published in the *Journal of Research in Interactive Marketing*, a team of researchers forecasts that consumers will increasingly be offered hyper-personalized products formulated upon a person's biomarkers—indicators of a person's biological state that can be gathered through things like saliva, breath and blood samples.

"Technologies are now in place that will transform the consumer goods industries in the next five to ten years; most notably in health, wellness and beauty products," says professor Mark Rosenbaum, lead author of the study and chair of

the retailing department. "We envision consumers increasingly purchasing products, such as vitamins, meals and cosmetics, that are formulated based upon a consumer's unique DNA sequence."

According to the team's research, companies are already working to create product lines such as home-delivered meals and skin care that are customized based on analysis of a customer's DNA sample submitted through an at-home blood test. Additionally, nutrition companies are partnering with wearable technologies, such as fitness trackers and skin-serve sensory patches, to notify wearers of bodily needs that can be satisfied through consumption of specific products.

And while it might be nice to have the perfect shade of lipstick or reminders on what supplements you need to stay healthy, are consumers willing to trade privacy for convenience? A 2017 study that examined consumer attitudes toward new technology found that while consumers are wary about volunteering the data necessary for personalization, they still desire a tailored retail experience.

The Oracle Retail 2025 Report polled 709 consumers and found that shoppers have a conservative appetite for retail technologies that require hyper-personal data to make decisions on their behalf and are more likely to accept intrusive technologies from a brand they trust. Slightly more than half of the respondents favor the idea of linking their wearable activity tracker to their pharmacy so they can suggest products to meet specific health and wellness needs.

Whether or not consumers are ready to use hyper-personalized purchasing on a day-to-day basis, these technologies have lifesaving possibilities.

"Wireless communication technologies such as RFID-NFC and quantum ID tags have the potential to prevent consumers from knowingly purchasing

counterfeit pharmaceutical drugs or infant formula," says Rosenbaum. "This [technology](#) is being refined by luxury manufacturers who want to prevent counterfeiters from destroying brand equity. Yet, the impact could be profound in preventing deaths and injury from the consumption of fake and potentially poisonous medicine and supplements."

Rosenbaum teamed up with the retailing department colleagues Karen Edwards, Jiyeon Kim, Jeff Campbell and Marianne Bickle for the recently published research, along with coauthor Germán Contreras Ramírez from the Universidad Externado de Colombia in Bogota. As far as the group is aware, they are the first to forecast the digitization of health retailing in a concise understanding.

"Combining our different perspectives helped us put forth a clearer understanding of the emerging trends in hyper-customized products," Rosenbaum says. "We hope this research will guide further studies in hyper-personalization and help retailers and manufacturers realize that the future trend in retailing will be customization at the personal level."

The new developments do not come without concerns, though.

"A major issue that consumer goods and retailers will confront is protecting consumers from hackers stealing their biomarker data," Rosenbaum says. "In addition, there is not yet a legal precedent for products that incorrectly read a consumer's biomarkers."

Despite these legal issues, [consumers](#), the health industry and retailers are poised to enter the next phase of digitization: a phase of hyper-personalization.

More information: Mark Scott Rosenbaum et al. The digitization of health care retailing, *Journal of Research in Interactive Marketing* (2017). [DOI: 10.1108/JRIM-07-2017-0058](#)

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