

Digital Food Preparation: Putting cooking back in the kitchen

Virtual assistants and other digital technologies are poised to return control to harried home cooks, “re-humanizing” the cooking experience.



Ask anyone who their favorite chef in the world is, and quite a few will say their grandmother.

They remember the fabulous smells that arose from her kitchen. They recall that huge cookbook or a box of handwritten recipes, passed down for generations. But these family traditions have changed drastically in the

digital age, where a quick visit to Google will show you how to cook almost anything. What's more, time pressures, dual-career families, and multiple commitments have led many, especially city dwellers, to opt for

convenience and food on the go. The result is fast, semi-processed meals that are more about filling stomachs than enjoying a repast with friends and family.

And yet, the Austrians we surveyed in partnership with the Institute for International Business at WU listed cooking as the most enjoyable part of the farm-to-table journey. Many stated that they would like to prepare food more often, but because it is so time-consuming, they need assistance and simplification. This creates a huge opportunity for digital services to design cooking experiences that delight the senses while simplifying the overall process.

There are five high-impact trends that underscore the potential of digital food preparation solutions: the connected world, virtual reality, smart homes, artificial intelligence, and mobility¹. The transformation of cooking is being enabled by digital heavyweights like Google and Amazon, through their hugely popular virtual assistants. Similarly, white-goods and cookware manufacturers offer smart cooking devices and appliances. Start-ups are entering the market with data analytics and tracking solutions, as well as with ideas for living furniture.

One of the more compelling depictions of the kitchen as a digital experience is IKEA's Concept Kitchen 2025, which imagines a smart table surface equipped with a camera and projector that will recognize ingredients, display step-by-step recipes, measure portions, and heat food through an induction top². All these ideas and trends suggest the prospect of a more experience-driven kitchen in the future. In fact, solutions that take initial steps toward this fully interactive, connected kitchen are already on the market.

A key component in this transformation will be the virtual assistant. Virtual assistants have sparked considerable and growing consumer interest, largely the result of their broad range of support features and accessibility. Although the technology is still in its early stages, 6 percent of Austrian consumers already own a digital assistant. Further, 31 percent of respondents admitted they currently encounter questions while cooking that could be answered by a virtual assistant, and one-third say they would be interested in using a virtual assistant to help them solve cooking questions. However, there is a significant gap between interest and actual purchase, given that many consumers believe that digital assistants are "nice-to-have but not a necessity." If this mindset changes, the virtual assistant market will quickly realize its potential. To translate interest into widespread adoption, virtual assistant providers will need to understand consumer profiles and address consumer needs and concerns by adding new capabilities and functionality to their products.

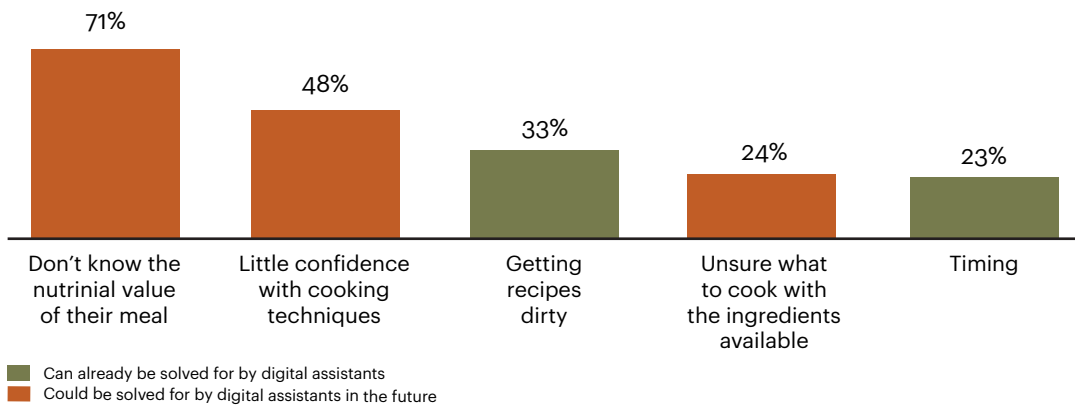
To continue building its customer base, the virtual assistant industry must communicate its value proposition more strongly. For example, current market offerings already solve some of

1. TrendOne (2017) <http://www.trendone.com/en/>

2. Oath Inc. (2017) <https://www.engadget.com/2015/04/20/ikea-concept-kitchen-2025/>

Figure 1

% of respondents who experience issue with cooking



Note: % do not add up to 100%, respondents were able to select all answers that applied
Sources: A.T. Kearney analysis

consumers' biggest cooking pain points: Getting recipes dirty and timing are concerns of 33 percent and 23 percent of respondents respectively (see Figure 1).

The second key to increasing adoption is addressing additional consumer demands. Currently, 48 percent of respondents say they are not confident about cooking techniques, while 24 percent have problems figuring out what to cook with the ingredients they have available. Further, 71 percent say they want to know the nutritional value of their meals so that they can lead a healthier lifestyle. These are problems that can be easily solved by virtual assistants. To expand the target customer base, industry players must maximize the value of virtual assistants by extending functionality and expanding product portfolios.

Finally, companies need to develop virtual assistants that anticipate consumer needs and bring interactions to a customized, personal level. There are a few early innovators that are moving in this direction. The SmartAll AI Butler is a virtual assistant that offers a seamless experience by integrating all of a user's smart devices. It also learns how consumers interact with these devices and anticipates their needs³. For example, if you bake regularly at a certain time of the day, it learns this and will switch on the oven five minutes before you walk into the kitchen. Artificial intelligence start-up Ozlo (recently acquired by Facebook) has created a chatbot that enables virtual assistants to ask users questions in order to clarify any ambiguous statements in recipes⁴. To further humanize virtual assistants, Emotech developed Olly, a virtual assistant with a "personality" that will evolve as it learns more about its owner over time⁵. Collaboration between big players, start-ups, and other partners will help drive more rapid innovation in this space.

All told, virtual assistants provide the key to unlocking the greater potential of the digital kitchen experience. Their affordable price makes them an easy entry product to the digital kitchen. Their basic functions can already resolve many consumer pain points when it comes to meal preparation. In the future, as connected appliances become more common, virtual assistants will be able to take on even more cooking support functions. Ultimately, customization and personalization will turn the digital kitchen into a humanized kitchen once again.

3. Live Smart (2016). <http://www.live-smart.co/smart-home/smartall-butler-7290>
4. Townsend (2017). <https://www.recode.net/2017/3/2/14786554/ozlo-virtual-assistant-tool-software-release>
5. CNET (2017). <https://www.cnet.com/products/emotech-olly/preview/>

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