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THE FUTURE IS NOW

CHATBOTS AND HR

Artificial intelligence (AI) is finding its way into mainstream business— a trend that is clearly evident in the rapid adoption of chatbots. By automating computers' interactions with people, well-designed and thoughtfully deployed chatbots can have an immediate business impact.

When Hermes,[1] a parcel courier in the UK, implemented a simple Oracle chatbot to help customers track shipments, it quickly found that 50 percent of incoming calls were being deflected away from human agents.

Accenture believes chatbots will have an especially significant impact in the HR function. Consider, for example, the HR service desk, a typically labor-intensive operation where humans handle queries from employees. By enabling a broader range of AI-enabled automated service-desk interactions, chatbots are likely to bring the same leaps in efficiency seen when self-service password re-set capabilities became the norm. The result is likely to be both enhanced service and lower costs.

With the introduction of the Oracle Digital Assistant,[2] Oracle has opened the door to the broader use of chatbots. Using natural language processing and machine learning, the Digital Assistant simplifies the development and application of sophisticated chatbots. As a result, Accenture believes companies using Oracle HCM should consider making the Digital Assistant part of their solution and adopting it to help HR harness more of the power of AI.[3]

CHATBOTS IN HR: THE NEXT LEVEL

A number of chatbot solutions have appeared on the market in the last few years.

In general, these have been used to develop individual chatbot applications, each of which handles a specific group of requests in a single area, such as onboarding new employees, submitting time sheets or creating expense reports. Where companies tried to combine these into a single application, the dialogue flow between computers and users has often become confusing or led to frustrated end users—largely because of the complexity of moving between the various chatbots. This ultimately limits the effectiveness of the chatbot channel.

To explore the potential of the Oracle technology in HR, Accenture created the Accenture Digital Assistant for Oracle, a chatbot solution built on the Oracle platform to support Oracle SaaS HCM organizations. In the Accenture Digital Assistant for Oracle, Accenture addressed the problem by offering a menu of services. The Accenture Digital Assistant for Oracle recognized the user's language, and offered the menu in those supported languages.

Oracle, which introduced chatbots in its mobile offering in 2017, is now taking them to the next level with its Digital Assistant.[4] The Digital Assistant enables companies to create a number of functionally specific chatbots, which Oracle calls "skills," that offer expertise in a specific subject area. Oracle Digital Assistant handles the navigation across those individual skills to deliver a seamless user experience. Thus, an employee might be conversing with one skill and then ask a question that needs to be routed to another. As that happens, the first conversation, or flow, remains active, so that the employee can be smoothly routed back to it when necessary.

For example, if an employee asks the system for their salary information, the Digital Assistant will route them to the payroll skill. They may then ask for their last salary payment. If they then ask when their next annual pay increase is due, they would be routed to the assignment skill. A following request asking for their most recent pay slip would be routed back to the payroll skill, but they would not have to re-ask to be sent to that pay period. In essence, the Digital Assistant manages these complex interactions behind the scenes and provides a unified interface to all the skills in use: From the user's perspective, it is one consistent experience.

Having the Digital Assistant navigate complex conversations across skills makes it possible to add more logic to a solution. The system could, for example, be intelligent enough to recognize when an employee is referring back to a previous response. If a user is updating their details and then when nearly finished says, "oh, and I forgot to say that my name has changed," the Digital Assistant could recognize their intent and route them to the correct intent in that or another skill and update the previous answers.

The Digital Assistant also lets companies use validation to change the logic flow. Imagine an employee asking for vacation time 14 months from now, even though there is a rule that says vacation cannot be booked more than 300 days in advance. Here, the Digital Assistant would return a response saying that it can process the request, but it won't go through because of the 300 day limit.

The Digital Assistant model is easy to train, and Oracle provides extensive guidelines to help companies create efficient chatbots quickly.[5]

Oracle recognizes the potential of Digital Assistants for HR, and is delivering a number of HCM skills for use with the Digital Assistant platform. For companies implementing Oracle HCM, the value of SaaS is that everyone is on the same code line, so these skills are available right out of the box for a quick start and can even be customized as needed.
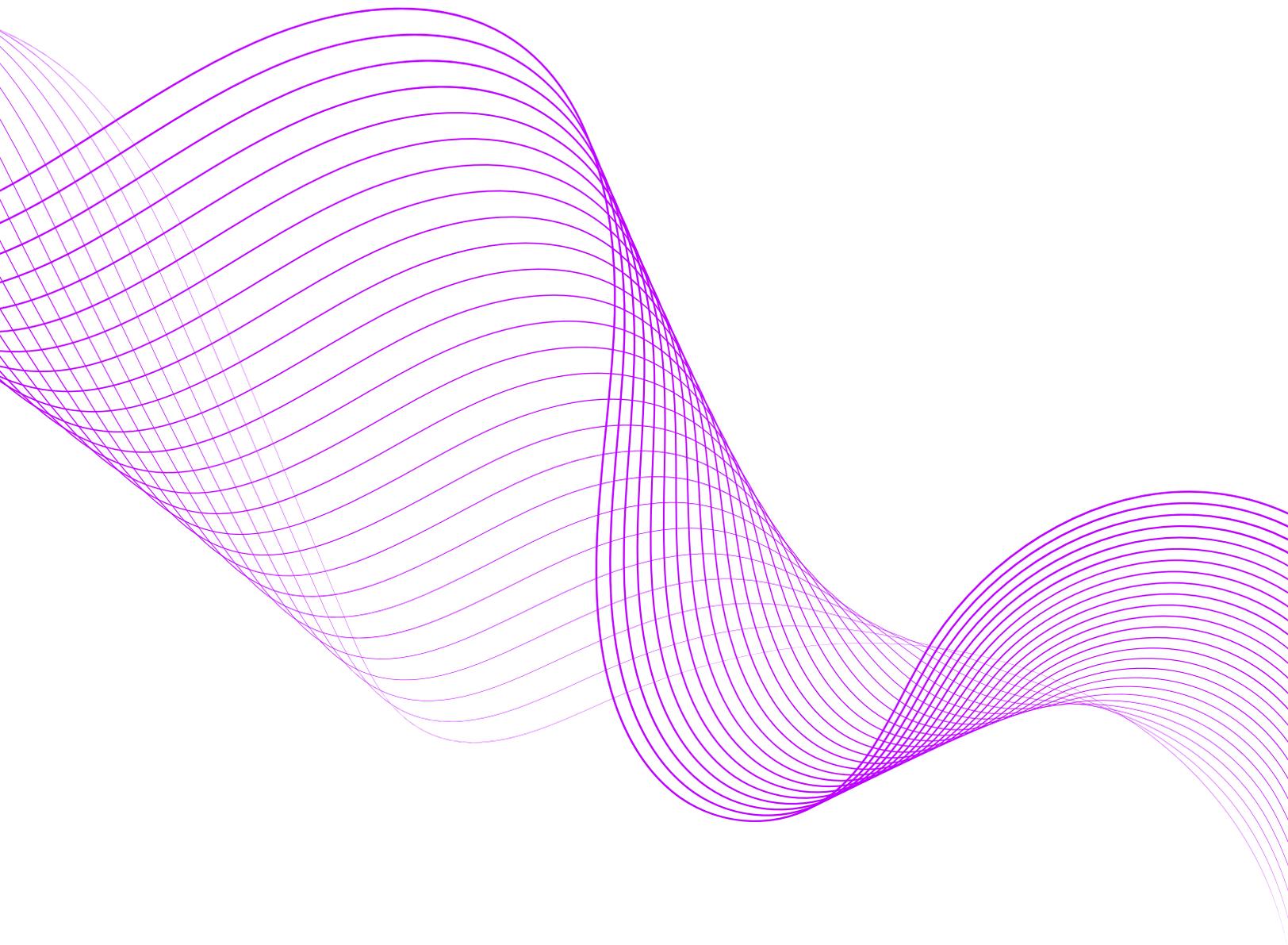
THE ROAD AHEAD

The Oracle Digital Assistant will continue to evolve and provide more and more capabilities.

For example, Oracle has already introduced the ability to have the Digital Assistant understand a simple user profile to recognize attributes such as whether the employee is an Oracle HCM or Oracle ERP user. With that ability, an employee simply asking for "the current month's report," for example, can be routed to the relevant application-related skill. Beyond that, Oracle is now investigating the ability to proactively offer the user something he or she has previously requested. Thus, if an employee asks for a pay slip every month, the Digital Assistant might go ahead and deliver those without waiting to be asked.

Oracle is also developing a "Conversational Designer," which is a method of coding a simple interaction. This is not intended to replace all coding. Indeed, the tool will not be able to create code for use in real-life scenarios. But it will enable companies to quickly design and spin up proof-of-concept applications.

In parallel, the Oracle SaaS teams will continue to extend the catalogue of skills that it offers. These SaaS applications—HCM, ERP and CX—are valuable sources of information for the Digital Assistant, and Oracle plans to roll out more of its own skills to allow companies to tap into those applications.

Accenture believes there is significant value in using more data sources with these skills. An HR function might want to use skills from multiple applications—it could, for example, be using Oracle HCM but relying on a non-Oracle system for payroll. That HR function could use the Digital Assistant with the skills that Oracle includes in HCM and complement those by writing additional skills that pull in information from the payroll system—or any other API-enabled system. Accenture works with a client that has selected Oracle Digital Assistant as the chatbot platform supporting its ServiceNow and SAP SuccessFactors.

Similarly, organizations are starting to use Oracle Service Cloud to expose data from many legacy systems in very innovative ways. For example, taking data extracts from old systems and exposing it within a customer portal. This gives the organization a more complete view of its workforce. Adding a Digital Assistant skill to Service Cloud, which in this scenario now holds all the relevant data, is an obvious next step.

There are many potential channels for the Digital Assistant, such as SMS, Messenger, Web Chat, and voice channels such as Siri and Alexa. People who are comfortable with these technologies will want their chatbot experience to be similar. To meet user expectations, companies may want to consider an omni-channel approach that lets people switch seamlessly between a variety of channels.

PUTTING THE DIGITAL ASSISTANT TO WORK

To get the most out of Oracle's Digital Assistant, companies will need to keep several important guidelines in mind.

Accenture recommends that companies carefully determine the persona of their Digital Assistant. Decide what persona the chatbot will have before the start of actual coding. This will give coders a model to work toward and allow for ongoing validation of each conversation as the chatbot is developed. This is especially important when multiple developers are working on a chatbot.

Like AI in general, chatbots need to be approached with ethical considerations in mind. In particular, the company's use of chatbots needs to be transparent. While companies may give chatbots human-like qualities, it important not to present the Digital Assistant to employees as an actual human—make it clear to users that they are dealing with an automated system. With that in mind, Accenture's Digital Assistant for Oracle is given a human-sounding name, but it also introduces itself as a chatbot. The importance of that type of approach is underscored by recent state legislation in California[6] that makes it mandatory to tell chatbot users that they are talking to a computer.

For companies taking advantage of the Digital Assistant, sound security practices will be critical. Most Digital Assistant conversations are simply returning data, but it is possible to update various company systems if chatbots are accessing them via an API. As a result, companies should assess what type of security they will need to have in place. If chatbots are updating personal data, for example, the proper authentication of users will be vitally important. With that in mind, Accenture decided that passing a token back from the application with authentication could degrade application security, so it has integrated the Accenture Digital Assistant for Oracle with Oracle's Identity Cloud.

Organizations also need to pay close attention to the data being used for AI. The Digital Assistant can log all user calls, and that data is used to train the chatbot model. If an organization stores that data, it may find itself managing personal information in a platform that is less secure than its systems of record. It is possible to simply redact sensitive information, such as bank account numbers, in the log. However, companies may want to go further, and consider logging only aggregate information for trend analysis, rather than the full set of information used to train the model.

Making effective use of increasingly powerful chatbots will require new approaches in HR. Accenture recommends that organizations move forward gradually and learn as they go. Begin with the creation of a governance framework to assess possible uses, prioritize use cases, and determine the limits of the work to be handled by chatbots. In developing the skills, companies can start with simple tasks, such as fielding basic questions. These chatbots can then be rolled out and tested with small employee populations. This experience can then provide statistics and feedback that can be used to train the Digital Assistants further and expand their use in HR.

Modern enterprise applications are more intuitive than legacy systems, but AI-powered channels such as chat, messenger, voice, and mobile, packaged up in a Digital Assistant solution, can provide a new touchless application for enterprise productivity. Having data anywhere, anyplace, anytime has become a basic requirement. The Digital Assistant provides another avenue for accessing data and using it to make informed decisions.

The potential benefits of the chatbots and Oracle's Digital Assistant are significant. If just 20 percent of basic HR queries can be deflected, the savings for most organizations will be considerable. In addition, AI and automation are widely recognized as keys to freeing HR teams from transactional, non-value-added activities, and allowing them to focus on strategic work and further gain traction with the business.[7] The Digital Assistant can be a vital component in making that vision a reality.
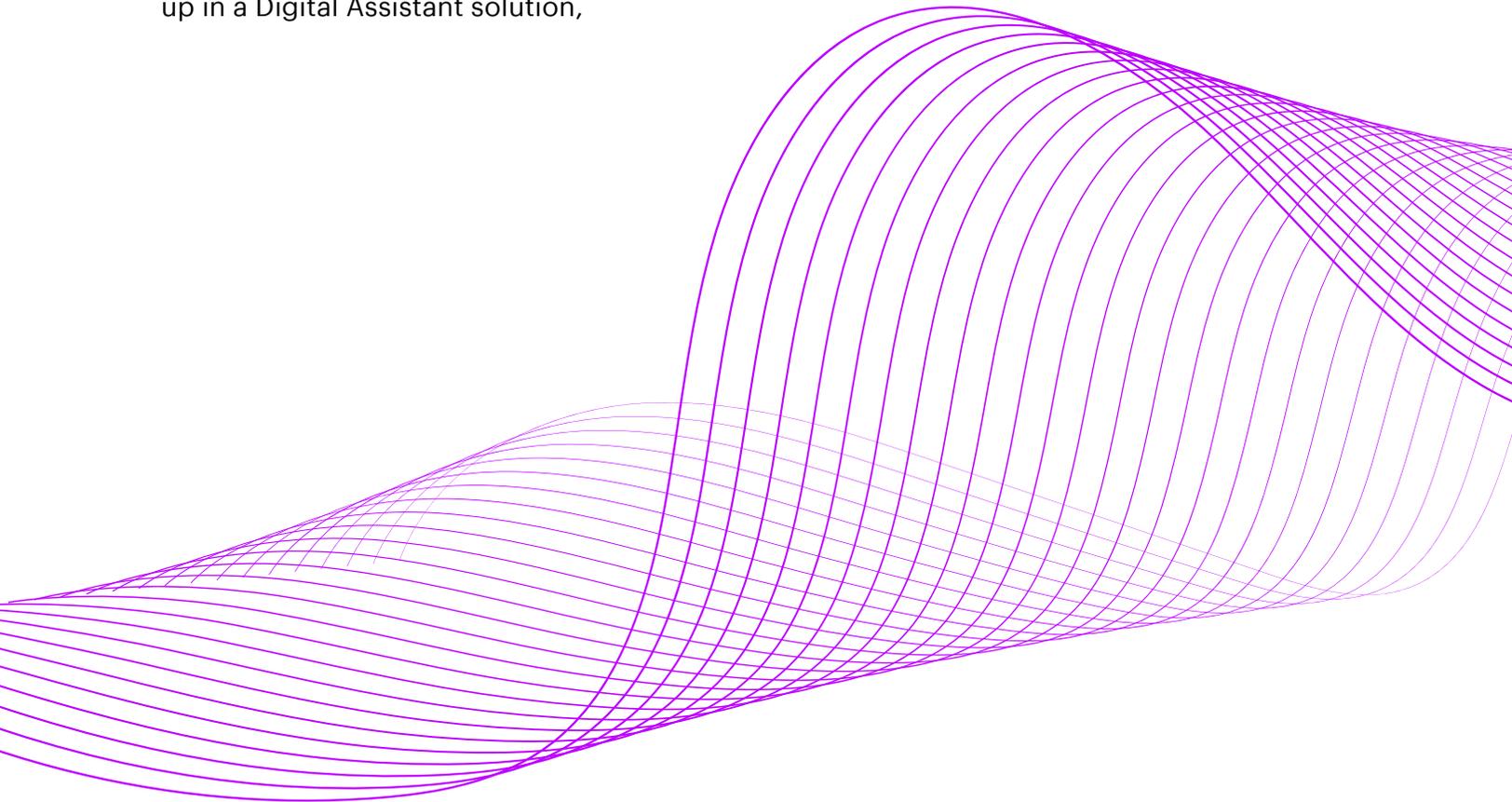
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References

1. https://vimeo.com/311628003

2. https://cloud.oracle.com/opc/paas/datasheets/Oracle+Digital+Assistant+Datasheet.pdf

3. AI is 'baked' into HCM in other ways. https://www.forbes.com/sites/oracle/2018/11/07/artificial-intelligence-helps-chros-navigate-the-changing-world-of-work/#4fff56456aee

4. https://www.oracle.com/corporate/pressrelease/oow18-digital-assistant-102318.html

5. http://www.oracle.com/da

6. https://qz.com/1409350/a-new-law-means-californias-bots-have-to-disclose-theyre-not-human

7. 'Igniting HR for Strategic Business Partnerships'. https://www.accenture.com/t20181012T080431Z__w__/us-en/_acnmedia/PDF-87/Accenture-Igniting-HR-POV-Accenture-Operations.pdf#zoom=50

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