



velrada



# Bots and AI driving digital engagement and service delivery

How Artificial Intelligence (AI) and chatbots are becoming necessary for customer service and intelligent decision making.

A whitepaper by Velrada

2019

# INTRODUCTION

Bots and virtual customer assistants (VCAs) are becoming more widely adopted.

Three-quarters of organisations surveyed by [Gartner](#) increased customer experience (CX) technology investments in 2018. The top three emerging technologies expected to have the biggest impact on CX projects in the next three years include artificial intelligence (53%), virtual customer assistants and chatbots (39%).

Whether it be native SMS or apps such as iMessage, Hangouts, or specific messaging apps such as Facebook Messenger, WhatsApp, LINE, Snapchat, Kakaotalk and others, a 2018 [twilio](#) survey found that 9 out of 10 users would like to talk to businesses using messaging. Further, Millennials choose messaging over email as the preferred method of engaging with a business, and messaging is also 3-8x more preferred than face to face communication across all generations.

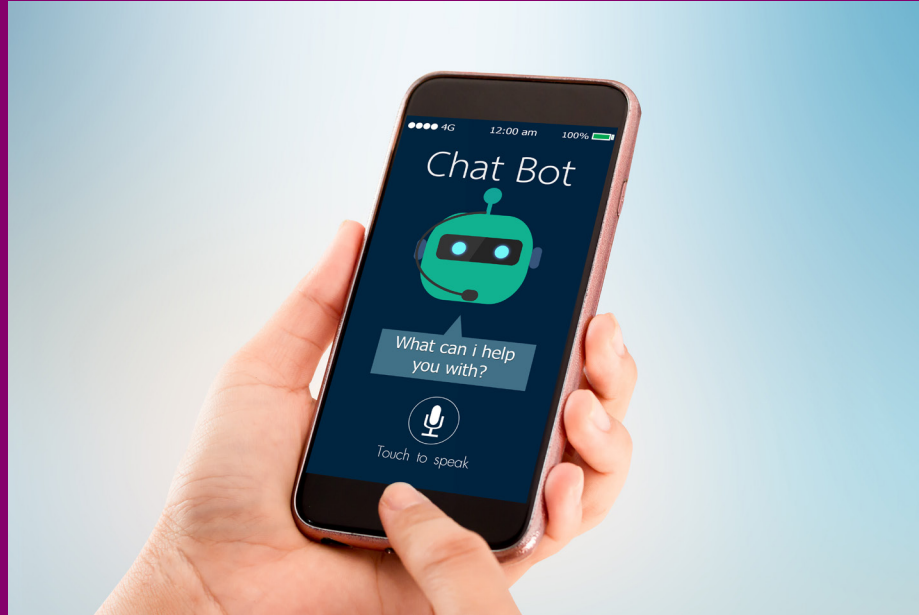
Individual apps are out. Bots are in. "In the post-app era, chatbots will become the face of artificial intelligence (AI) and bots will transform the way apps are built. Traditional apps, which are downloaded from a store to a mobile device, will become just one of many options for customers." ([Gartner](#))

## What is a Chatbot?

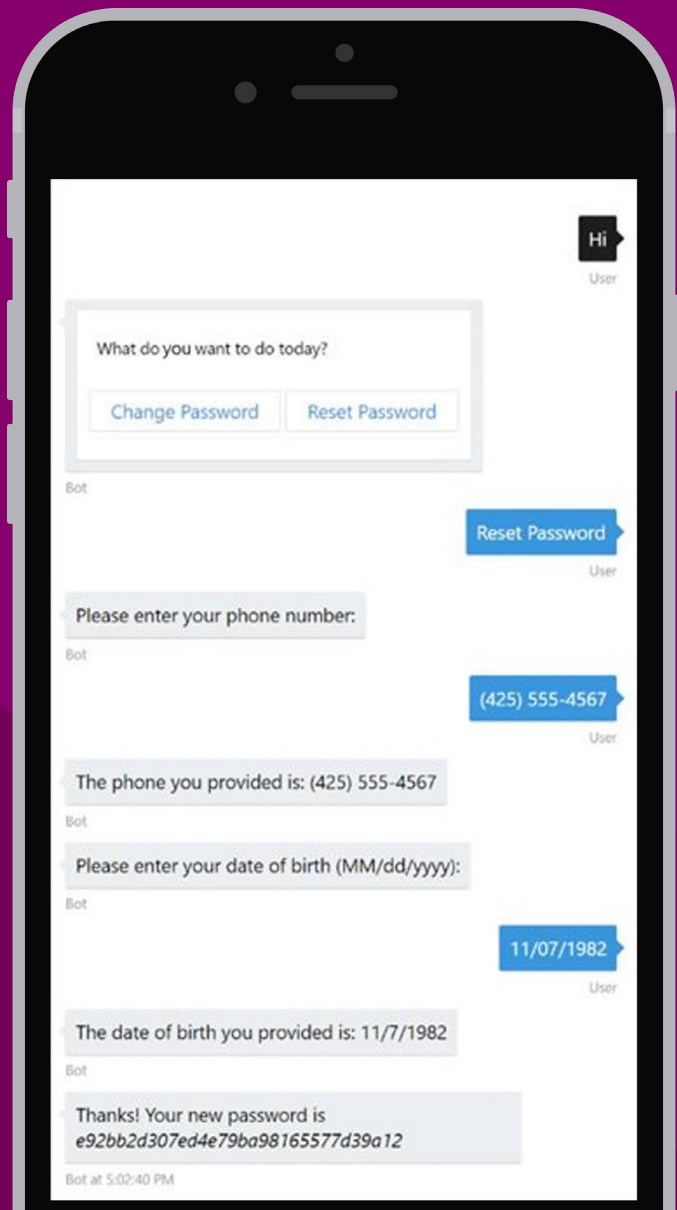
A chatbot is a computer program or an artificial intelligence which conducts a conversation.

Chatbots are typically used in online communications, such as FAQs or Questions and Answers, for various practical purposes including customer service or information via auditory or textual methods.

Bots can also perform internal functions such as change passwords, adjust schedules and set appointments.



By 2020, the average person will have more conversations with bots than with their spouse ([Gartner](#)).



# What does AI mean for organisations?

**A 2019 [Gartner](#) survey shows 37% of service leaders are piloting or using artificial intelligence bots and virtual customer assistants.**

“We’ve seen how AI operates in our personal lives (think Siri, Google and Amazon Alexa), but the workplace can be more complicated than Google searches and reminders. The flexible, intelligent workplace will be powered by AI technology that is engaging and fulfills the complex needs of a variety of roles” ([LiveTiles](#)).

Lauren Villeneuve, Senior Principal, Advisory at [Gartner](#) says “Service centres should seriously be considering how this technology could be integrated into current operations, in both customer-facing and rep-facing systems.”

In Australia and New Zealand, 27% of CIOs expect AI to be the most disruptive technology for their organisations in 2019, taking the top spot away from data and analytics, which now occupies second place at 22%. “The rapid shift to AI looks revolutionary on the surface, but ANZ CIOs aren’t very innovative in creating uses for AI,” said Brian Ferreira,

Vice President Executive Programs at [Gartner](#). “They need to experiment more to identify a greater range of uses within their organisation if they’re going to keep up with the innovators and disruptors in the market who invest more in it”.

This isn’t about pitting man vs machine, but integrating effective and intelligent software that can eliminate mundane tasks that erode productivity, engagement, performance and increase time spent on revenue raising tasks.

AI assistants can be the ultimate companion, potentially doubling (or more) productivity, reducing errors and allowing humans to work on higher value tasks by automating time consuming, manual work. The potential is enormous and the case for individual AI assistants for every employee is compelling.

For this reason the [LiveTiles](#) all-in-one solution allows businesses to build digital workplaces that integrate the resources and applications they use. AI in the workplace is not about finding the one ‘chatbot’ solution for all employees, but multiple and even individual AI assistants that are truly ‘your’ assistant ([LiveTiles](#)).



**80% of smartphones will have on-device AI capabilities in 2022, up from 10% in 2017 ([Gartner](#)).**

## Examples of Conversational Bots

<b>Internal Bots</b> <i>Experiment and Improve</i>	<b>Simple Customer Bots</b> <i>Unauthenticated Services</i>	<b>Advanced Bots</b> <i>Authenticated Services</i>
<b>Internal Knowledge</b> Take existing FAQs and empower staff to provide self-serve knowledge via Bot	<b>General Enquiries</b> Handle basic customer enquiries traditionally hidden in FAQs	<b>Account Enquiry</b> Handle enquiries that require identification of the customer (i.e., account balance enquiry)
<b>IT Helpdesk</b> Report an IT problem and check the status. Bot can provide self-help and escalation to engineer if required	<b>Appointment Booking</b> Handle simple “anonymous” tasks via chat (i.e., booking an appointment)	<b>Make Payment</b> Perform actions that require a user to be authenticated and authorised, e.g. make payment to predefined payee
<b>Smart Document Agent</b> Search of relevant documents based on the user’s needs	<b>Complex Enquiries</b> Automatically hand off requests that a Bot cannot complete to a human agent	<b>Retail Bot</b> Send a customer with a new device to a stall to help them set up their services

# To bot or not to bot?

## And is that even the question?

Mobile devices and rapid advances in artificial intelligence (AI) technology have resulted in an explosion of customer service interfaces and field service real-time information delivery solutions. Applications range from simple chatbots on messaging platforms to advanced digital assistants capable of managing workflows and resources with machine learning.

When evaluating the suitability and applicability of bots for your organisation, there are several potential benefits and challenges to consider for internal and external customers:

### Bot Benefits

- Basic implementations can provide the first layer of customer service by handling basic questions. AI bots are able to solve simple issues while letting advisors focus on the more complex tasks.
- Sheer volume of requests; Bots are able to help serve a growing customer base without the necessity of adding advisors, with little or no wait time.
- Bots can provide 24 hour customer service at no extra cost.
- They can be embedded and integrated in various applications.
- Chat logs provide a valuable source of data.
- Scalability. Bots can be started small and built upon as time allows and learning increases.

### Bot Challenges

- The information the bot dispenses is only as good as the information it has access to. Responses need regular updating according to feedback and analysis, whether it be manually or inbuilt with artificial intelligence.
- Bots with linguistic and natural language learning capabilities are still quite rare. Colloquialisms, slang and other language subtleties can cause some comprehension issues.
- There are some instances where a customer expects to speak with a person to explain their situation in detail.
- Managing expectations upfront will make users more forgiving about certain mistakes the bot might make. It is important to make clear to a customer that they are chatting with a bot rather than a human.

What is apparent in the pros and cons of implementing bot technology is that the inherent issues are human-caused and potentially preventable. The benefits of chatbots, for both internal and external customer service delivery provide a solid argument for implementation on a scalable level for local government and private enterprise alike.

By 2021, more than 50% of enterprises will be spending more per annum on bots and chatbot creation than traditional mobile app development ([Gartner](#)).

## Why a Conversational Bot?



Expose your products and services via messaging platforms, where users are already highly engaged

Improve customer experience and reduce the need for call center assistance



Activate fast and more convenient customer engagement through natural language

Streamline away app installation, login and lengthy payment flows



Reach customers anywhere, on any platform or devices

Harness machine learning to continually improve.



# A smart digital assistant for centralising communication

**Hootsuite predicts that by 2020, more than 85% of all customer service interactions will be powered by AI bots.**

As part of their Customer Service Strategy, a large Australian local council identified that many of their customer service processes and procedures were complicated, distracted from their main objectives and that many manual processes need to be automated.

The sheer volume of information available at this LGA in a multitude of legacy systems resulted in many inaccuracies and user searches. Knowledge was not in a central location or easy to locate. These limitations provided considerable challenges to the customer service staff and hindered their ability to resolve customer enquiries.

With the arrival of digital platforms such as chatbots and smart digital assistants, an opportunity to develop an internal 'smart digital assistant' enabled their organisation to easily locate the answers to frequently asked questions relating to procedure, process, workflow, policies, relevant legislation, available services, Human Resource tools, statistics and event calendars.

The chatbot solution is expected to provide a quality knowledge base to enable the organisation to refine service offerings and enable customer experience officers to easily locate answers to customer enquiries.

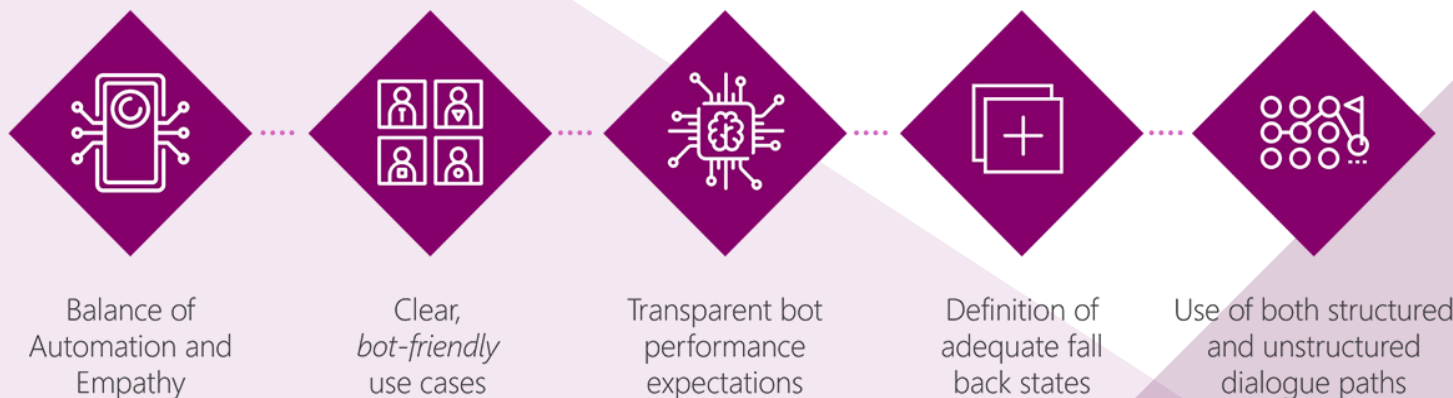
Leveraging existing technology investments and enabling the creation of relevant and discrete bots across the enterprise, a solution was devised with the capability to improve communications and facilitate cooperation and understanding between business units.

The chatbot functionality has the capability to:

- provide an instant platform of answers to 'I want to...do, go, find' intent-rich moments;
- be delivered in natural language with processing backed by Machine Learning;
- evoke answers through a mapped Dialogue Flow delivery platform and Choice Architecture maps;
- capture knowledge to improve processes and evolve current service deliverables; and
- generate question analytics to enable Machine Learning utilising/optimising existing content sources.

**The opportunity is to steer AI into roles that free humans to focus on productive work that matters ([Forbes](#)).**

## Our Bot Implementation Fundamentals



Balance of Automation and Empathy

Clear, *bot-friendly* use cases

Transparent bot performance expectations

Definition of adequate fall back states

Use of both structured and unstructured dialogue paths

# Digital Assistant provides recruitment advantage



**A new form of communication was needed to stay front-of-mind with university students, within the digital channels they're familiar with.**

One of the country's premier financial advisory organisations needed to ensure they were recruiting the best and brightest among new graduates. They were competing with the top four global accounting brands, so a strong differentiator was needed to represent their vision and accessibility to potential hires.

They were already receiving a high volume of email queries from graduates and maintaining a rapid response required significant administrative effort. An opportunity was identified to streamline the process and get better insight into historical questions and the best responses.

Using AI cognitive services, Velrada developed "Buddy", a digital recruitment assistant able to respond to conversational requests from potential recruits 24/7 via the website and direct them to a human agent if they need further help.

Buddy's responses are not limited to text alone. It also includes photos and other imagery relating to the topic, as well as web links the students can use to get what they need.

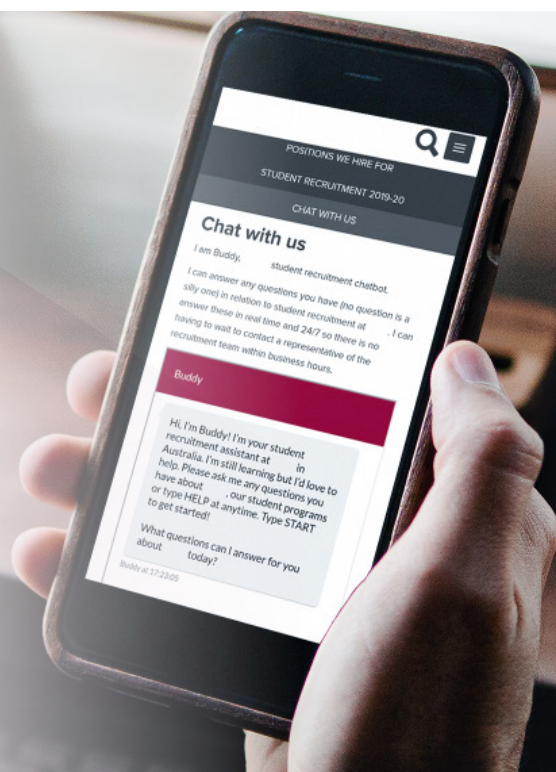
Buddy also boasts sophisticated learning and analytics tools. All conversations, their keywords and their end results are captured in a central database and are analysed using a PowerBI dashboard. This makes it easy to improve Buddy's knowledge and responses iteratively, over time.

Having Buddy respond to front-line requests from students won't just mean a big reduction in email queries. It will also mean the queries that are received, and their responses, are of higher value since the basics have often been covered already.

Potential recruits will be able to engage in real time and receive an answer at the moment their interest is piqued. Besides ensuring their interest doesn't diminish waiting for an email response, Buddy exemplifies technical sophistication and cultural currency—a brand differentiator that will resonate with students. Buddy's design and the visual content in the responses also serve to reinforce brand awareness.

With a successful debut launch on their website, the leadership team are making plans for his next phase of growth, with an eye to other digital communication channels and the potential addition of facial recognition.

In a future state, the chatbot can be enhanced to potentially generate a candidate assessment profile by asking a series of questions and allows the submission of resumes via the chatbot.



# Employees empowered and HR enabled

**As the field of human resources continues to evolve, so do the job descriptions of HR professionals. Repetitive information dissemination can be delegated allowing HR to focus upward.**

With employee growth and increasing workload on the Human Resources department, an Australian State government agency recognised the need for a more streamlined internal system to handle internal employee entitlement enquiries.

Using Velrada's V:Bot technology, a Human Resources Q&A bot "Eddie" was developed to retrieve secure information for employees around Leave and Awards, including:

- Leave Types
- Entitlement
- Summary with URL/Link to obtain further info
- Application process
- Awards and Agreements

The data source contains details of Leave Balance for various leave types and thresholds. This can be extended in future phases to (with indicator if exceeded), future leave book indicator, leave projection and other variables of interest to employees.

A key component to success was to enable Eddie to recognise various questions as they may occur in natural language:

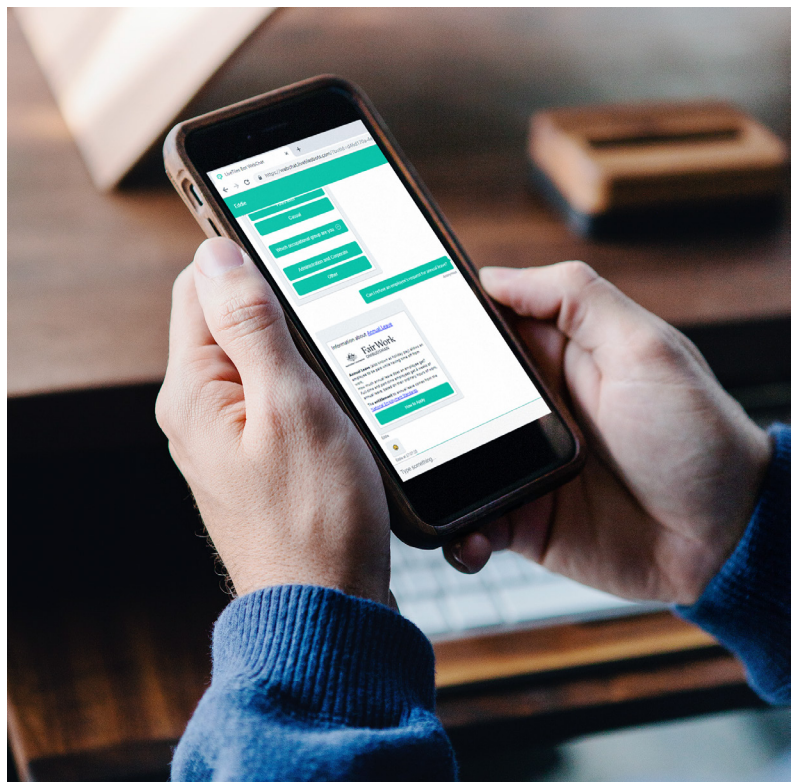
- Can I cash out my annual leave?
- Can I cash out my leave?
- What is my leave entitlement?
- Can I refuse an employee's request for annual leave?
- Can my manager refuse my request for annual leave?
- How much annual leave do I have?
- Show me my employees' annual leave balances?

A solution has been developed via implementation of a highly UX focussed Q&A based bot in the LiveTiles framework that is plugged into the existing Azure services, with integration into Microsoft landscape (Office, Outlook) and automatic authentication against Active Directory. The inbuilt abilities of the bot included integration with Q&A, Microsoft Flow, Excel and other applications such as Planner, Azure Search, Meetings and OneNote.

Velrada worked closely with stakeholders to define the user experience, how the data is accessed and made personal to the user, and to train the content owners on how to improve the bot using provided reporting and visuals. Inbuilt conversation logging was also provided for analysis to the team for continuous improvement.



V:Bot can be trained to use a more extensive and natural human vocabulary, and remembers how people have tried to talk to it in the past.



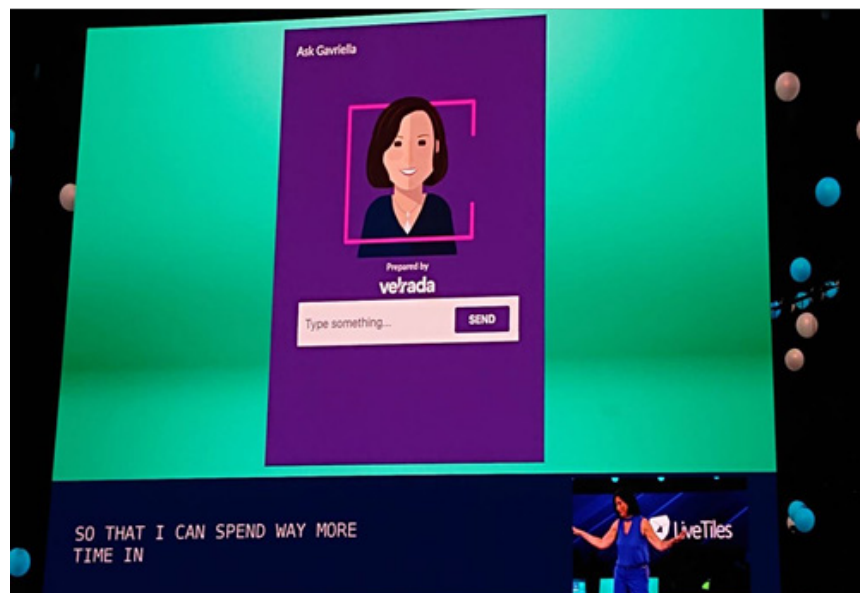
# What makes Velrada a partner of choice in bot design?

While bots are considered to be a feature of the modern workplace, they often fail to be sufficiently intelligent. At Velrada, we infuse intelligence into bots by leveraging Microsoft's advanced analytics technology.

At Velrada (a Microsoft Gold Certified Partner), we work with clients to understand their business processes and identify opportunities where bots can add real value. We specialise in Data and AI. We're also one of the best in the world at business application solutions (Microsoft awarded us Partner of the Year in Dynamics 365 for Field Services). These two things combined means we have the know-how to integrate artificial intelligence seamlessly into your business operations; AI that draws insights from organisational, third-party and open datasets.

In short, we make bots and AI real and relevant to your organisation.

77% of ANZ CIOs are already using AI technology. The top three ways AI is being used is for process optimisation (32%), chatbots (26%) and computer-assisted diagnostics (21%) ([Gartner](#)).



## The Best of Bots



### Personal

User data is integrated to personalize all interactions



### Proactive

AI anticipates customer needs and enhance service



### Productive

Workflow and task automation lightens load on human staff



### Natural

Engage with customers conversationally, in real-time



### Dynamic

Measure and evolve automatically for continuous improvement



# Introducing V:Bot

V:Bot is a functional demonstration, a little taste of what can be done with today's bot technology with surprisingly little effort and investment.

V:Bot was built using the LiveTiles Bots platform, powered by Azure, and is designed to showcase a handful of advanced capabilities that could be integrated into a production environment bot.

### Benefits of V:Bot:

- Deeper staff engagement
- Immersive User Experiences
- Intuitive tasks aided by machine learning and data analytics
- Business processes infused with Dynamics CRM intelligence
- Increased staff productivity

Among other things, V:Bot can schedule meetings, send emails and create task lists in Office 365, render Power BI dashboards in real time, conduct persistent sentiment analysis during conversations and interrogate Dynamics 365 to retrieve customer and financial information.

It can also get the latest weather and news. At an enterprise level, V:Bot can participate in question and answer dialogue, link to corporate knowledge bases, conduct sentiment analysis, add records to a Power BI data set, retrieve sample customer accounts details from Dynamic CRM, and much more.

### Try V:bot for Yourself!

Specialising in building custom bots for organisations of all sizes, all over the world, to meet their day-to-day business goals, Velrada have used the LiveTiles Bot Framework to build "V:Bot", then integrated it across multiple platforms within its own online demo environment.

The purpose of this demo bot is to get you excited about what YOU could do with a bot of your own. V:Bots features serve as inspiration: the limit is your imagination.

[Check It Out](#)

## V:Bot Integration Examples



### Office 365

send email, set task, schedule meeting



### Power BI

render charts and graphs in real-time



### Text Analytics

apply sentiment analysis to trigger escalations



### Dynamics 365

retrieve financial and customer data



### Azure

integrate with other cloud-based applications

To find out more, contact us on [1300 835 723](tel:1300835723) or [info@velrada.com](mailto:info@velrada.com)



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