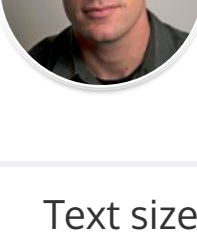


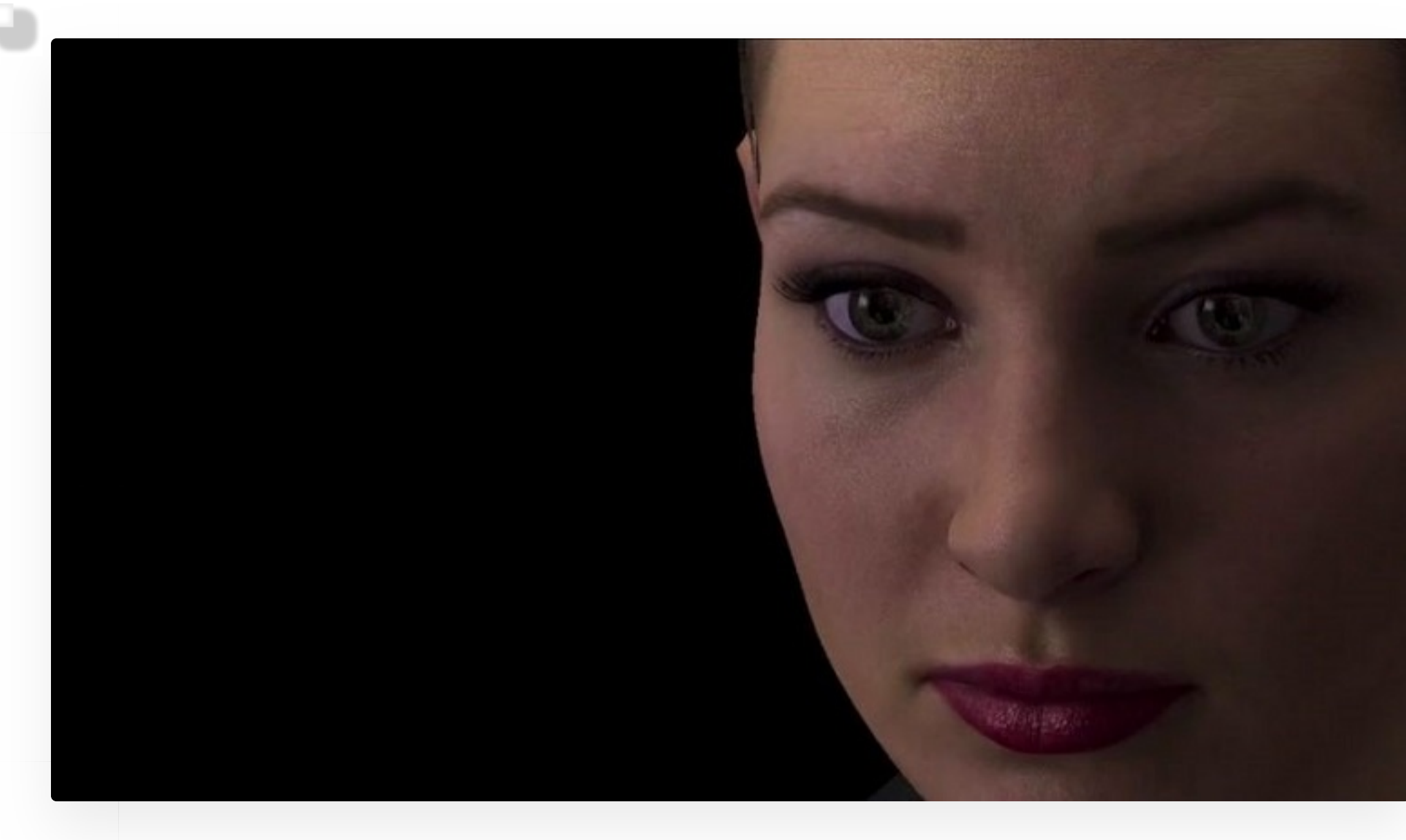
By **Stephen Easton**
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APS centre of excellence to develop the next generation of robot public servants



The Department of Human Services has opened a new Augmented Intelligence Centre of Excellence in Canberra to lead development of virtual assistants and encourage their adoption by other arms of the federal bureaucracy.

The government wants to make sure the Australian Public Service “stays ahead of the curve with future developments” in the “rapidly evolving” field of robotic customer service, according to the Minister for Human Services and Digital Transformation, Michael Keenan.

Meanwhile, the opposition and the Community and Public Sector Union continue to argue the Coalition government has neglected its responsibility to adequately staff his department with humans. Keenan says he envisages human staff being supported rather than replaced by increasingly clever software — hence the focus on “augmented” intelligence for the new APS centre of excellence.

“Augmented intelligence is not about replacing people with machines, but rather about developing ways to better support our people and further enhance the customer experience for the millions of Australians who rely on our services,” he said in a statement.

According to the minister, the AI Centre of Excellence will collaborate with academics and companies developing these products “to ensure world’s best practice is incorporated” and also to make sure “regulatory or ethical considerations are addressed before rollouts take place” in government agencies.

“Other government agencies will also be encouraged to contribute their expertise and gain insights from the work being done by the centre.”

As part of the launch, “high-ranking public servants from right across government” were invited to see a technology showcase featuring relevant offerings from IBM, Microsoft, Amazon Web Services and Trellis Data.

Fully customisable virtual assistants

The main goal of Keenan’s AI research and development unit is to work towards a new generation of “fully customisable virtual assistants that will be able to speak any language, be able to talk people through each step of an online application form, or even let them know if they are eligible for a benefit without being prompted” — which he also foreshadowed at the [launch of his Digital Transformation Strategy](#) last week.

First, however, the plan is “refocusing government services around life events” by joining up the services run by separate agencies across ministerial portfolios, and across the different levels of government. Achieving this would lay the groundwork for advanced bots that will be like “your own dedicated government digital assistant”, according to Keenan’s comments last week at the National Press Club.

“This means that everyone accessing government services may have access to their own dedicated personal avatar assistant that can talk in their language, that knows their preferences, that understands their needs and can provide a familiar face when you’re dealing with government,” he said.

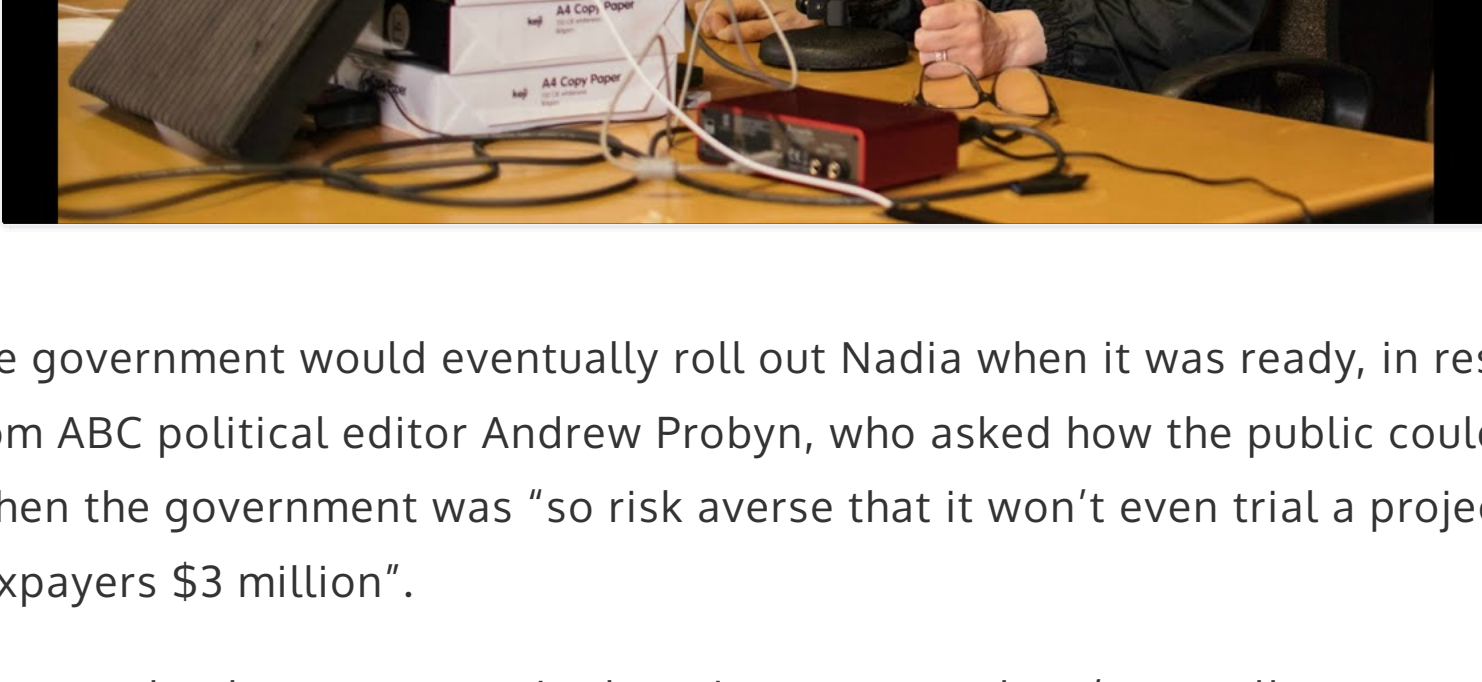
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“This is not science fiction. In fact, a couple of years ago, my department had a prototype, Nadia, that was world leading. Unfortunately, at the time, Nadia wasn’t quite ready to deliver on the promise, but technology in this area is evolving rapidly.”

Nadia is a cutting-edge bot, voiced by Cate Blanchett and intended to interact with National Disability Insurance Scheme participants, which was [put on hold indefinitely](#) amid [concerns that it was not ready to be seen in public](#) and would expose the government to further criticism.

The Australian Digital Health Agency which runs the MyHealth record system has also [reportedly started work on a proof-of-concept for its own advanced virtual assistant](#) with [FaceMe](#), one of several companies involved in the creation of Nadia, along with New Zealand’s [Soul Machines](#), which was founded by Oscar-winning [autonomous animation expert Mark Sagar](#).



Keenan said the government would eventually roll out Nadia when it was ready, in response to questioning from ABC political editor Andrew Probyn, who asked how the public could believe in his digital plans when the government was “so risk averse that it won’t even trial a project that has already cost taxpayers \$3 million”.

“Look ... if you’re a technology company in the private sector, there’s actually an enormous tolerance for rolling things out quickly that fail,” Keenan responded.

“In government, there is no tolerance for it whatsoever, and we’re not given that sort of leeway. So, when we do roll out new technology, we do need to be satisfied that it is going to work.”

Having just admitted there is no tolerance for bugs in government systems, he then went on to argue this was not the same as saying the government was “timid when it comes to digital transformation” and cited Australia’s position on various international rankings.

“That’s recognised by any international survey you would care to look at; most recently, by the United Nations. And we’ve done that because we have been very good at rolling out these things. But there just isn’t that tolerance for failure within government that we can afford to roll things out until we’re 100% satisfied that they’re going to work.”

One of Nadia’s creators, former National Disability Insurance Agency executive [Marie Johnson](#), recently penned an article welcoming the renewed focus on getting these “digital humans” to work in the public service.

“For many years, I have been publicly advocating for this, and I know personally how inherently liberating this capability is to a great many people,” [she writes on the C/O website](#). “I am pleased with the government’s recognition of the role that digital humans will play in service delivery.”

AI-powered digital humans

Johnson says Nadia is a truly world-leading project that demonstrates “Australia doesn’t need to look to Estonia or the UK or the UN digital government leader board for validation” and holds the promise of a way to improve the customer experience. She refers to the new generation of bots as “digital humans” because, if they are developed well enough, they have the potential to be much more than a text-based chatbot.

“AI-powered digital humans provide a new and unique way for people to access information and services, through a highly engaging, non-judgemental face-to-face conversational interface – and literally using natural language and every day common words and phrases.

“Previous digital transformation strategies and service delivery reform efforts were about removing the human dimension – pushing people away and into forms, apps, websites and over-burdened call-centres and treating people like machines. ...

“Digital humans are embodied empathetic intelligent digital beings with a co-designed personality, defined roles, a deep body of subject matter knowledge capable of having contextual conversations – not just simple chit chat.”

She says that with the right development through co-design, with psychologists playing a leading role, rather than user-experience gurus from the IT industry, they can be empathetic and better equipped to help people of all abilities, including those who fear “judgement and stigma” due to low literacy, for example.

The big players in the tech industry have begun to realise that creating intelligent avatars requires a human touch, so as not to make egregious mistakes and offend people in various ways. Google recently decided its new “smart compose” feature in gmail [should just avoid saying “him” or “her” altogether](#), in one of many similar examples.

Johnson’s point is that these digital assistants can be made into true “digital humans” that are a pleasure to do business with, for anyone in the community, but doing so requires the right expertise and intentions to customise them for their specific jobs in government — which is not a job that can simply be left to software developers.

She also suggests this path is a more realistic way to provide better customer service than more investment in counters and call centres. “Notwithstanding the massive investments being made, the current model is not coping. Simply adding more resources (dollars and head-count) will not address the demand and will not future-proof for the decades ahead.”

Getting enough people to answer all the phone enquiries that go to Centrelink within a reasonable timeframe has been an ongoing struggle. The agency was unable to answer about 88 million calls in the 18 months to January this year — or about 48 million over the 2017-18 financial year — and many of those that get through [have to wait on hold for quite a long time](#).

The minister claimed the agency was “already a leader” in the adoption of digital assistants for answering customer enquiries and helping staff find information more quickly. He said its three customer-facing bots had answered about two million enquiries since June 2017 — a small fraction of what the department receives — and its staff-support bot Roxy had fielded about the same number of questions from public servants, but over the past two years.

He says the customer service bots, Sam, Oliver and Charles were already “saving Australians considerable time and also reducing demand on our busy phone lines”, and Roxy was also leading to faster claims.

Keenan has also suggested that outsourcing extra contact centre capacity from labour-hire to government was improving those figures in the meantime, citing a report he commissioned from KPMG that purportedly found contractors met demand favourably to departmental staff in terms of performance and cost-effectiveness, without reducing customer satisfaction.

However he is under fire for refusing to release the full report to back up his claims, rejecting an order from the Senate for him to produce it by claiming public-interest immunity on the grounds of cabinet confidentiality.

Top image: Nadia, the cutting-edge bot prototype.

About the author

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Departments: Department of Human Services National Disability Insurance Agency National Disability Insurance Scheme

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