



GARDIAN WEBINAR EVENT

THE FUTURE OF TECH IN AGED CARE

Australia's aged care sector is undergoing major reforms to improve the quality of care, with a push towards the use of assistive technologies to help. Learn about how new AI assisted technologies can significantly improve care.



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An elderly couple is shown in profile, smiling and celebrating on a boat. The woman, on the left, has short grey hair and is wearing glasses and a light-colored sleeveless top. The man, on the right, has a grey beard and is wearing a light blue button-down shirt. They are both holding champagne flutes. The man is also holding a bottle of champagne, which is being opened, with a spray of foam and liquid visible. The background shows a calm body of water under a sunset sky with soft, warm colors. In the upper right corner, there are decorative white circles of varying sizes, some arranged in a pattern that resembles a sun or a moon. The overall mood is joyful and serene.

**Ageing is just
another word
for living**

Industry Transformation

The aged care industry is in an era of unprecedented change.

Aged care reforms, royal commissions and business model transitions have moved technology disruption to a front page topic.



Industry Transformation

The aged care industry is in an era of unprecedented change.

**Commissioner
Briggs second
recommendation
was for investment
in technology to
improve quality of
life.**



**Royal
Commission
into Aged
Care Quality
and Safety**

**Final Report:
Care, Dignity
and Respect**

Industry Transformation

The aged care industry is in an era of unprecedented change.

"...Second, increased investment is needed in pre-certified assistive technologies and smart technology to support care and functional needs of older people, and help manage their safety and contribute to their quality of life."



Industry Transformation

The Aged Care Industry IT Council (ACIITC)

Technology Roadmap delivered in 2017 has 5 Destinations to frame the required transformation.

Technology-enabled operational, business and communication systems.

Technology-enhanced care and support for older people.

Technology-enhanced information and access to care.

Technology-enhanced assessment of eligibility and changing need.

A technology-literate and enabled workforce.

Positive Ageing

Almost all older people want to live in their own homes.

A recent USA survey identified 77% of older people want to age in their homes but only 50% believe they will be able to.

Positive Ageing means:

Independence.

Good health.

Security.

Participation in family and
community life.



**Technology can
assist and play a
key role in delivering
positive ageing
outcomes.**



Considerations

**These
are a
must**

Privacy & Security concerns must be addressed.

Choice must be maintained.

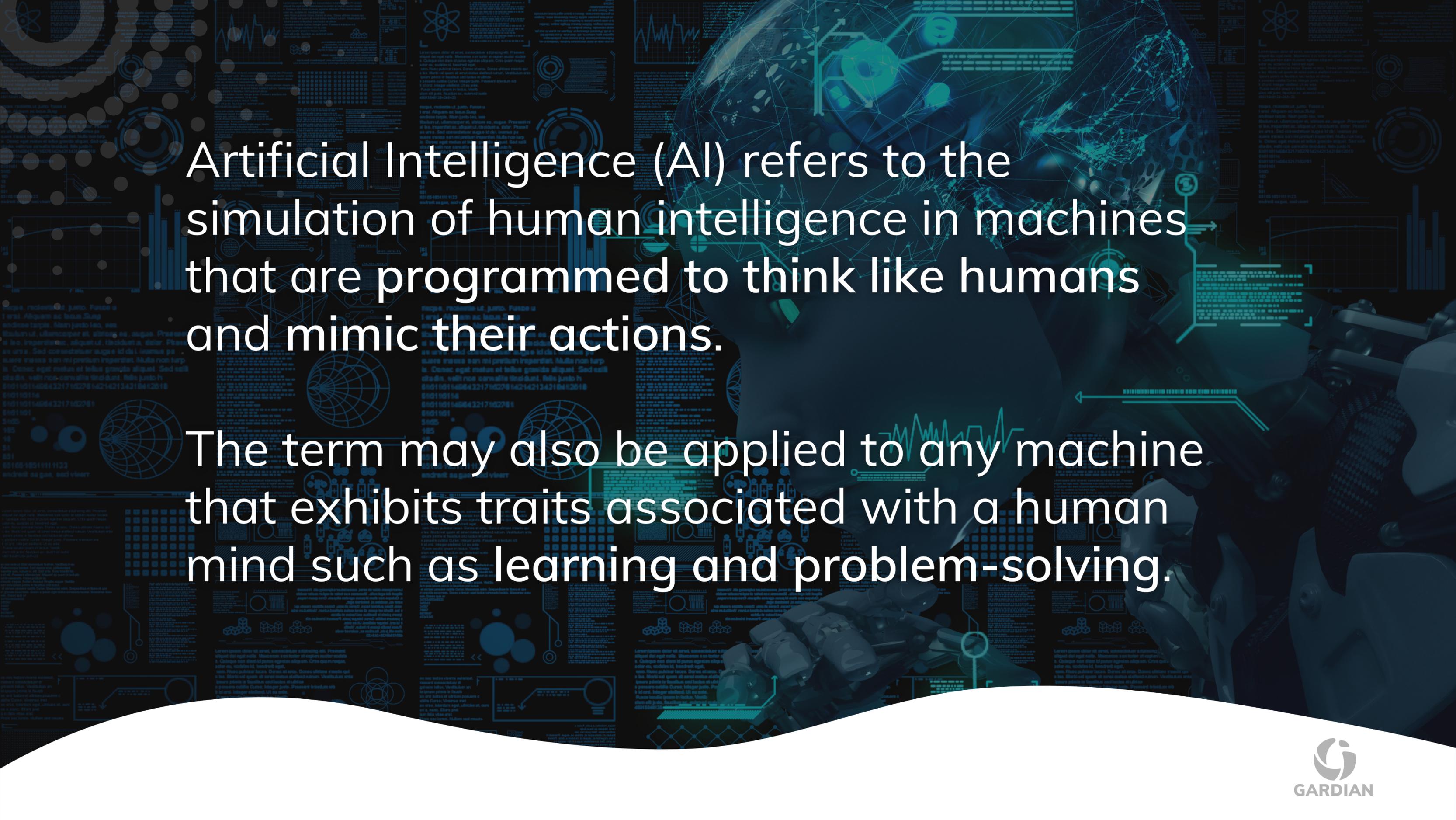
Informal and formal carers or networks must be supported.

Support for those with cognitive issues including dementia must be considered.

Affordability must be a priority.

Equality & fairness must be maintained regarding gender, race, ethnicity, socio-economic status and location (urban / rural / regional).

What role can AI play?

The background is a dark blue, futuristic digital landscape. It features a glowing blue brain in the upper center, surrounded by intricate network lines and data points. To the right, a robotic hand is visible, holding a glowing blue cube. The background is filled with various data visualizations, including bar charts, line graphs, and circular diagrams, all rendered in shades of blue and white. The overall aesthetic is high-tech and data-driven.

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.

The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.



AI allows healthcare stakeholders and medical professionals to identify needs and solutions faster and with more accuracy.

What role can AI play?

AI can identify patterns and insights undetectable by manual human skillsets.

Big data analysis.

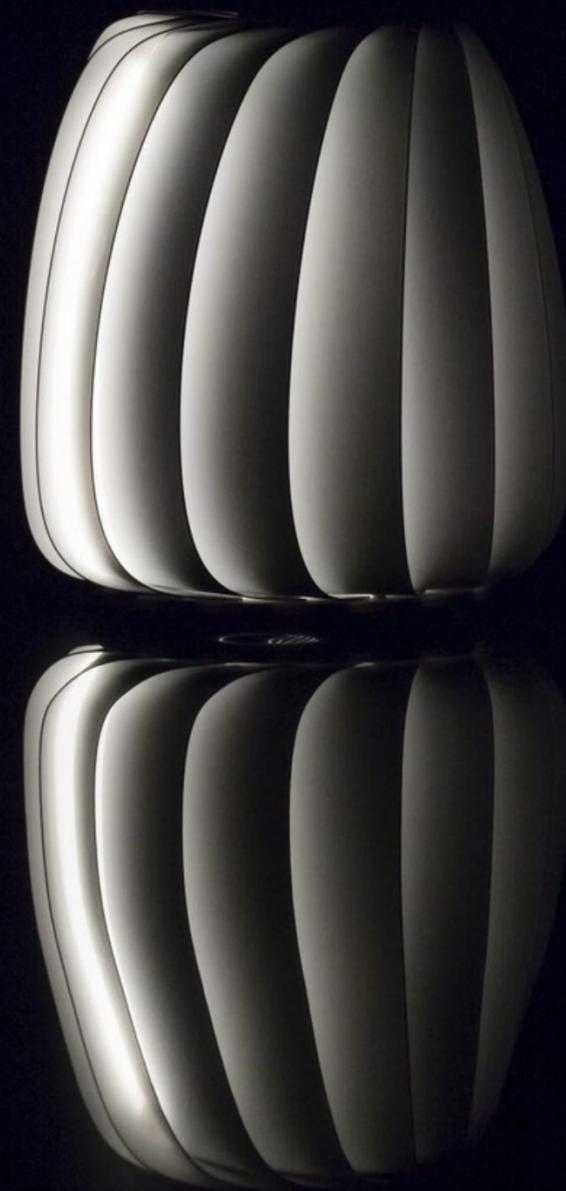
AI is able to analyze vast amounts of data in the form of images, clinical trials, claims, reports to improve the quality of care provided to people.

This is achievable in speeds that are an order of magnitude faster than human processing outcomes - not because of computing power but because of the focussed execution of tasks ie; no distractions!

AI CASE STUDY

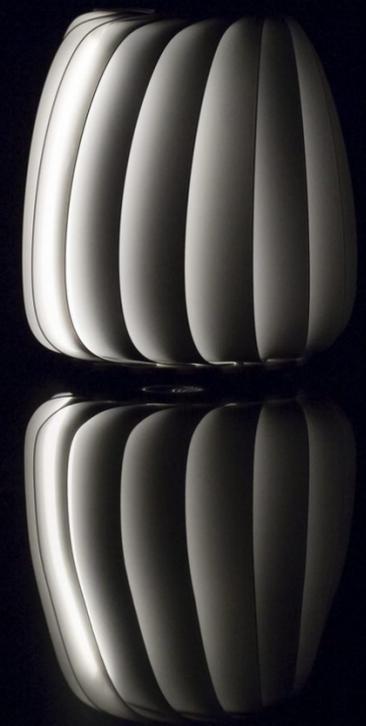
Corti

The AI tool that understands doctor-patient conversations.



About Corti

- Corti is an AI tool that assists EMS staff to detect heart attack victims during emergency calls for assistance.
- Corti analyses the voice of the caller, the background noise, and relevant medical history of the patient.
- The program alerts the emergency staff if it detects a likely heart attack.
- Corti has been trained by listening for particular signs, and was trained on thousands of call records.
- In Copenhagen the EMS call staff can identify a cardiac arrest based on description by the caller 73% of the time.
- Corti increased this to 95% and in a much shorter period of time to dispatch therefore increasing the chances of saving that individual.



AI CASE STUDY

CloudMedX

CloudMedx 

The AI tool that collects and converts disparate healthcare data and creates a holistic, actionable view of the individual to create an aligned intelligence.

About CloudMedX

- CloudMedX uses an AI platform to collect and convert disparate data into actionable recommendations or views
- ePCR's – electronic patient care records – are ingested into the platform
- The disparate data is curated, tagged and converted to identify key patterns
- Actionable insights are generated to improve patient outcomes
- CloudMedX has been used in several high-risk diseases such as renal failure, pneumonia, congestive heart failure, hypertension, liver cancer, diabetes, stroke – reducing the time and cost to patients and clinicians by reducing the time to achieve accurate diagnosis

CloudMedx 

Creating Fairness & Equity in AI





Creating fairness and equity with AI

Utilising ethical principals in AI design

Responsibility to be fair and equitable.

All Healthcare providers including system or solution providers have a responsibility to deliver fairness and equity to clients.

Only as good as its programming.

AI can only deliver the best of human intelligence without the inequities or biases that humans can display only if programmed to do so.

Removing common biases.

Race, ethnicity and gender biases can all be removed using AI to ensure fairness and equitable outcomes.

Transparency in design.

AI algorithms should be explainable, auditable and transparent.

Ongoing impartial analysis.

AI will always operate with unbiased predictions using impartial analysis of the data on an ongoing basis.

Improving independent living with Auxilio

Auxilio uses smart wearables linked with AI to monitor health and wellness, to monitor and learn routines, and to proactively predict potential health or wellness issues before they become problematic.



Auxilio is non-intrusive. It does not require installation, wiring, sensors, or a PhD to operate.

Auxilio has been designed to integrate into everyday life and is underpinned by ethical AI design principals.





Using fashionable smart watches, Auxilio is a state of the art assistive technology that is not ugly, bulky or a simple sensor or fall detector.

Gardian Auxilio predicts a deterioration in health and wellness, and detects if medical intervention is required, in or out of the home.

- Early prediction of health deterioration.
- Predicts adverse events.
- Provides early warning signs.
- Improves safety and quality of life.
- Enables timely assistance.
- Improves medication management.
- Supports organisations, recipients and family.



Gardian Auxilio provides carers and families with wellness status PLUS the dashboard datasets to go deeper.

- Wellness indicators provide a quick reference for carers, clients and families.
- Control dashboard allows review and deep dive on each client under care.
- Past incidents / history is available.
- Care plans are auto populated with relevant time stamped data sets and incidents.



Partnering with best of other breed organisations.

At Gardian we recognise that no one organisations capable of delivering every aspect of our product strategy.

Exploring partnerships for research and design.

We are exploring partnerships with a number of providers, including Datarwe based in Southport, on the Gold Coast.

Datarwe is a data analytics company that provides an acute care medical research platform as a service (PaaS).

Enabling AI clinical diagnostic outcomes.

The Datarwe platform enables the development and delivery of AI clinical diagnostic outcomes for the selected data sets we share with them.

Our initial focus will be on epilepsy/seizure identification and pain identification - these will support clients that are non-verbal or who have cognitive issues including dementia across both the aged care and disability care domains.



In Conclusion

A focus on digital health solutions continues to expand on a global scale.

- Technology will become a key differentiator and create a competitive advantage for organisations that take the lead.
- Aged care is never going away, and future clients will be late end baby boomers and GenX who will expect technology to support their requirements for a better experience in later years.
- Auxilio is focussed on providing affordable market leading solutions with a continued focus on product development and improvements in consultation with industry bodies, providers and end users.

Open Discussion

Email Address

info@gardian.tech

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THE FUTURE OF TECH IN AGED CARE

Thank you.

