



**A THRIVING ADVANCED MATERIALS ECONOMY**  
**March 2018**

<https://archerx.com.au>

# Highlights from 2017



- Granting of a Mining Lease for Campoona graphite deposit
- Acquisition of Carbon Allotropes online carbon materials marketplace
- Appointment of internationally recognised advanced materials and graphene expert Dr Mohammad Choucair as Archer CEO
- Cobalt footprint expanded with discoveries made at Ketchowla, Broken Hill and Yarcowie
- Exploration success with new copper discovery at Blue Hills
- Archer fully funded to implement new minerals and advanced materials development strategy

# Strategic Priorities

## Advanced Materials

- Develop mine and processing facility for Campoona graphite deposit
- Enter new graphite, graphene and advanced materials markets through strategic acquisitions
- Lead strategic partnerships and collaborations to enable growth aligned to reliable energy, human health and quantum technology
- Grow the Carbon Allotropes marketplace products and customer base across multiple industries and geographies
- Develop recurring revenue streams

## Exploration

- Leigh Creek Magnesia Project: discussions with potential offtake partners and toll processing
- Blue Hills Copper: high priority targets identified from AEM survey and infill soil sampling survey
- Ketchowla Cobalt Manganese: multiple additional targets to assess. A simple acid leaching process can extract manganese, cobalt, nickel and copper
- North Broken Hill Cobalt : a large area of approximately 450km<sup>2</sup>. Early exploration work has been successful with 4 large targets identified
- Identify and crystallise value creation opportunities



**Advanced materials are needed to drive future industries and technologies.**

# Our Vision



We're creating advanced materials that enable reliable energy, human health and quantum technologies for the betterment of society.

## Reliable Energy

Market value of energy storage systems is projected to be worth **USD\$19.04 billion** by 2022, with the greatest growth expected to be within the Asia Pacific region.

Demand: The Environment

*Source: MarketandMarkets. Aug 2017.*

## Human Health

Biotech driving the 5-year CAGR of 3.1%, with a market size expected to reach **USD\$381.6 billion**, and 56.6% of the industry's revenue relating to human health.

Demand: Aging Populations

*Source: IBISWorld. Dec 2017*

## Quantum Technology

Quantum computing and related technology is projected to be a **USD\$29 billion** industry by 2021, and currently represents <1% of the electronics industry.

Demand: Computing Power

*Source: Goldman Sachs. Feb 2018.*

# Our Approach



- **Exploration** of Australia's natural resources to find and source the building blocks of modern technology
- **Integration** of our high volume and high value operations, focused on graphite and graphene
- **Collaboration** in graphene development targeting global industries spanning energy, medicine, and electronics



**Graphite is a critical mineral resource  
and vital for energy storage.**

# Campoona Graphite Project



*Securing an integrated graphite supply chain and reducing supply-side risk*

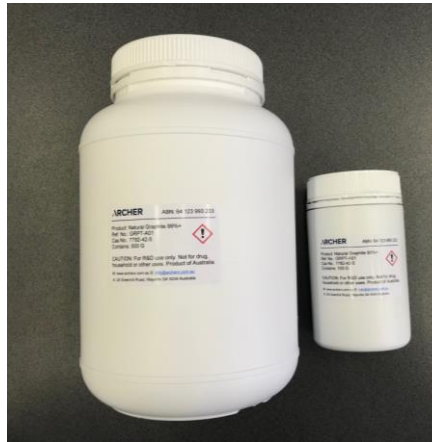
- Archer granted a mining lease and are in the process of applying for environmental approval
- Graphite Project 100% owned by Archer with exploration upside
- A vertically integrated process that allows for the processing of up to 10,000tpa of graphite and the manufacture of 100tpa of graphene
- Long-life operation
- Sample products are packaged and are currently being shipped out to partners for testing and integration



# High-Quality Graphite – Large Volume Uses



- Archer's wholly owned Graphite project is in South Australia, Australia
- Archer's graphite products have up to +99% purity
- Suitable for batteries and graphene manufacturing





**Graphene is a true quantum material  
with almost infinite functionality.**

# Graphene Materials Solutions – High Value Uses

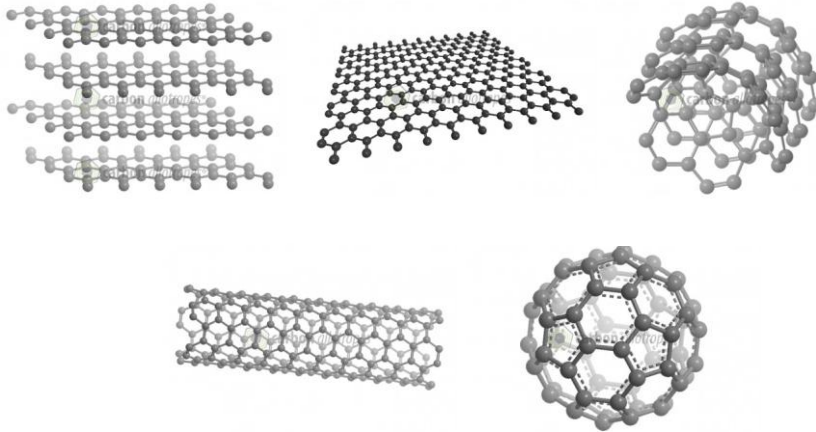


- High-quality graphene derived from Archer graphite
- Archer's supply of graphene secured through ownership of the Campoona graphite deposit
- Eliminated risks in dependencies on non-graphitic graphene feedstock markets like oil and gas
- Campoona Mining Lease terms include the processing of up to 100 tpa of graphene
- Ideal properties that allow Archer's graphene to be applied in reliable energy, human health and quantum technologies

# Carbon Allotropes Marketplace



- Direct avenue and platform for graphene sales and collaborations
- <https://market.carbonallotropes.com>



The screenshot displays the Carbon Allotropes Marketplace website interface. At the top, there is a search bar with the text "Search for carbon materials" and a magnifying glass icon. To the right is a shopping cart icon labeled "Cart (empty)". Below the search bar is a navigation menu with tabs for "ALL PRODUCTS", "GRAPHENE", "FULLERENES", "NANOTUBES", "DIAMOND", "GRAPHITE", "CARBON", and "SERVICES". A dropdown menu for "All Products" is open, showing "All Products". The main content area is titled "All Products" with the subtitle "All our carbon material products that are in-stock". Below this, it says "ALL PRODUCTS" and "There are 34 products." The page is sorted by "Product Name: A to Z" and shows 12 items per page. The first three items are displayed in a grid:

Product Name	Price	Status
Activated Carbon (30 g)	\$114.00	In Stock
Carbon Onions (100 mg)	\$335.00	In Stock
Double-walled Carbon Nanotubes (1 g)	\$664.00	In Stock



**Metals are required for an electrified future.**

# High Value and High Volume Commodities



- Exploration work continuing for a number of metals relevant to battery and electrical energy storage technologies
- **Cobalt:** Early exploration success at Broken Hill and Yarcowie
  - >90% cobalt recovery achieved at Ketchowla
- **Copper:** Discovery of >40km<sup>2</sup> intrusive style copper mineralisation at Blue Hills
  - Multiple targets identified

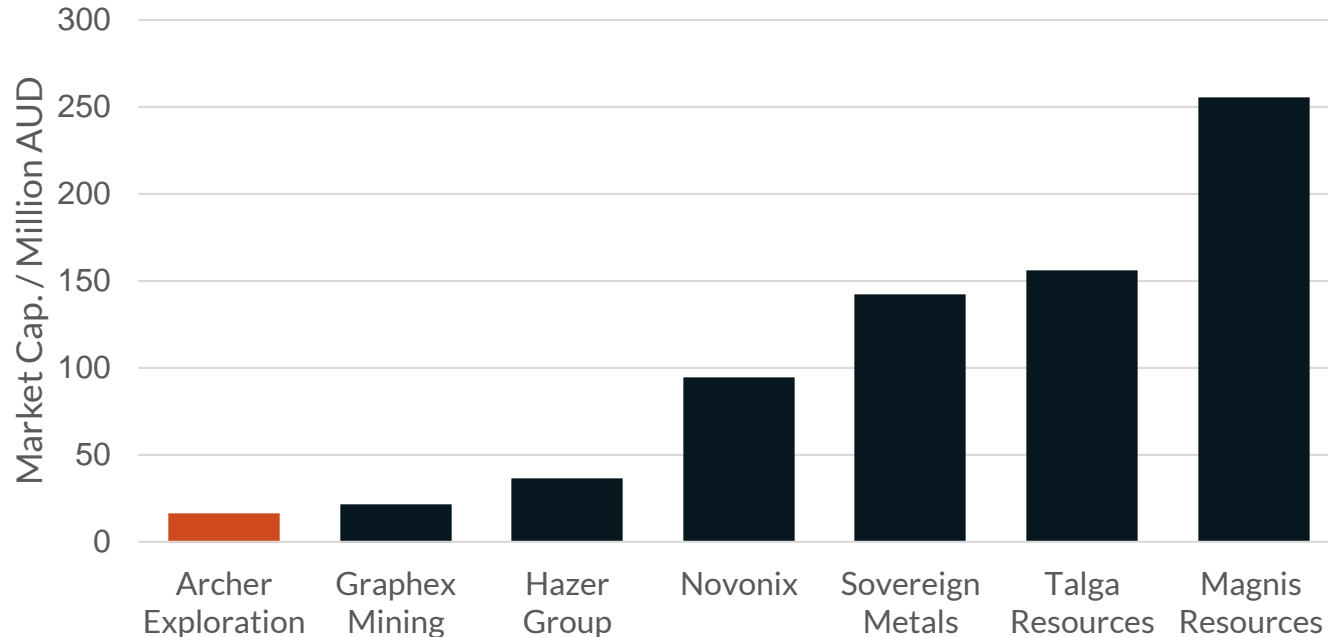


**Archer is positioned for growth over the coming year.**

# Market Capitalisation: Room for Upside



- A number of ASX listed companies are now developing graphene and advanced materials





# A time for growth: 2018



- Archer's entry to the graphite, graphene and advanced materials space
- Identify and negotiate with potential graphite project offtake partners
- Grow our local and international graphene development projects
- Expand the Carbon Allotropes platform to grow sales and products across key industries and geographies
- Identify new advanced materials markets and potential acquisition opportunities
- Continue exploration of high value mineral commodities

# Disclaimer



Slide 17 of this presentation contains:

- Cobalt recovery results which were first reported in an ASX announcement titled *Exceptional cobalt, manganese and copper recovery at Ketchowla* dated 12 February 2018 (Announcement 1); and
- Blue Hills exploration information which was first reported in an ASX announcement titled *Infill sampling at Blue Hills confirms continuity of copper mineralisation* dated 28 November 2017,

which contain the relevant statements, data and competent person's statement referred to in this presentation (together the "Announcements"). Archer confirms that all material assumptions and technical parameters underpinning information set out in the Announcements continue to apply and have not materially changed. The Announcements can be viewed at <https://archerx.com.au>.

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