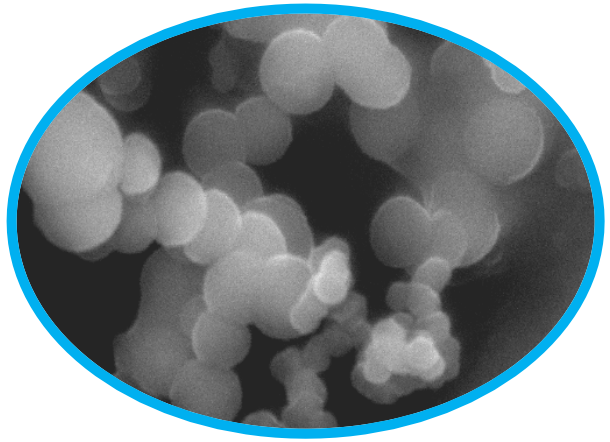
Innovative Silicon Solutions

FROM QUARTZ

SILICON METAL
"RAW SILICON"



NANO SILICON

HPQ – SILICON RESOURCES

DISCLAIMERS

This presentation includes certain

"FORWARD-LOOKING STATEMENTS"

All statements, (other than statements of historical fact included herein), including, without limitation, statements regarding future plans and objectives of the company, are forward-looking statements that involve various risks, assumptions, estimates and uncertainties, and any or all of these future plans and objectives may not be achieved.

These statements reflect the current expectations or beliefs of HPQ-Silicon Resources Inc. ("the Company") and are based on information currently available to the Company. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. All of the forward looking statements contained in this presentation are qualified by these cautionary statements and the risk factors described above. Furthermore, all such statements are made as of the date this presentation is given.

An investment in the Company is speculative due to the nature of the its business. The ability of the Company to carry out its plans as described in this confidential presentation depends on obtaining the required capital. There is no assurance that the Company will be able to successfully raise the capital required or to complete each of the growth initiatives described. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of the management and Board of the Company.

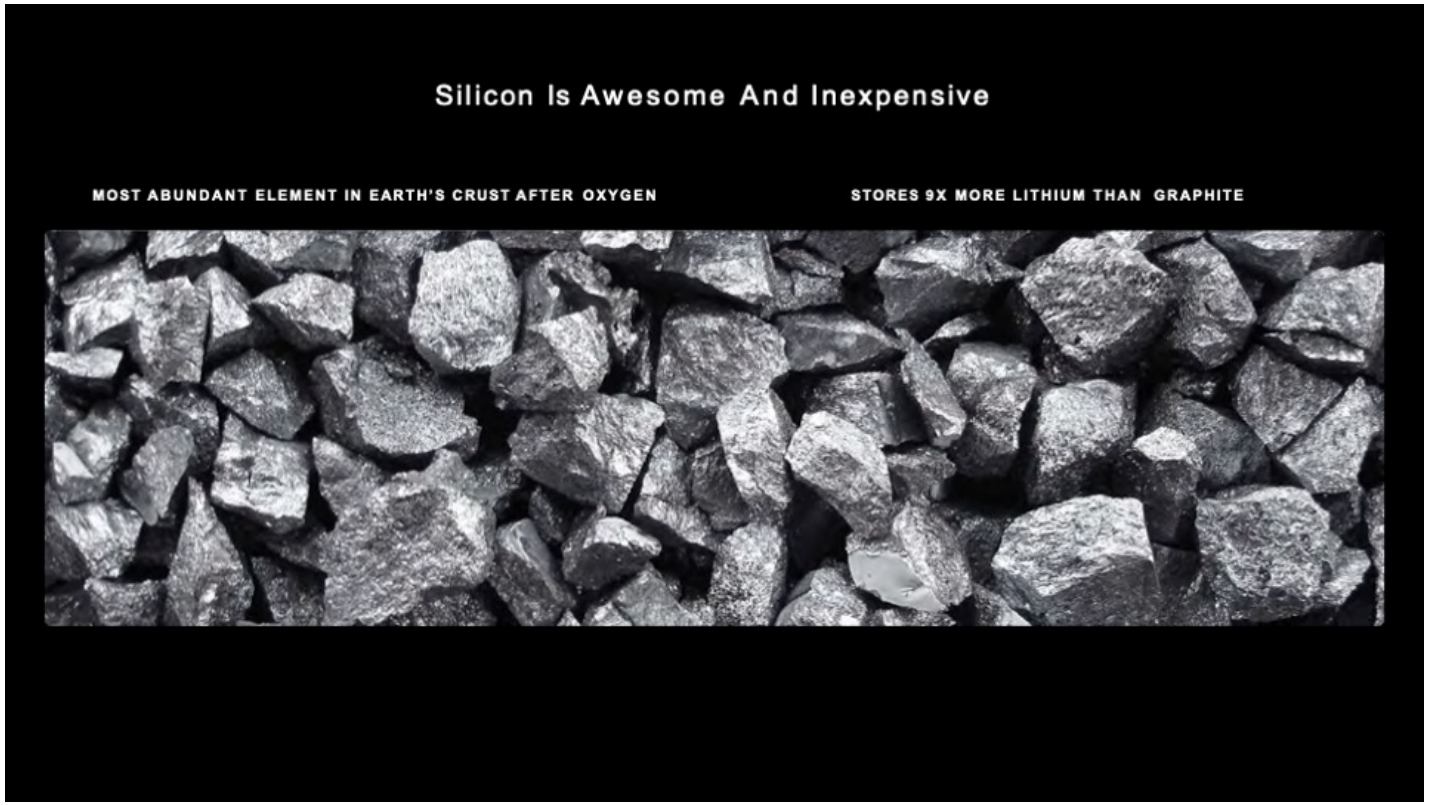
The Corporation is focused on developing the *PUREVAP™ processes. The PUREVAP™ Quartz Reduction Reactor (QRR),* (Patent Pending) a new carbothermic process to transform Quartz into Silicon, and the *PUREVAP™ Nano Silicon (Si)* Reactor (NSiR), (Provisional Patent applied) a new process to transform Silicon (Si) into Spherical Nano powders and Nano wires for Lithium-ion batteries. The terms Silicon, Silicon Metal and Si are used interchangeably. Metallurgical Grade Silicon or Mg Si refers to Silicon Metal of a purity between 98.0% Si and 99.5% Si.

Any monetary values given to end product produced by the equipment, projected capital or operating cost and savings associated with the development of process should not be construed as being related to establishing the economic viability or technical feasibility on any of the Company's quartz properties or more specifically the Roncevaux Quartz Project, Matapedia Area, in the Gaspe Region, Province of Quebec.

THE VISION

"To achieve the transition to sustainable energy, we must produce more affordable EVs and Energy Storage, while building factories faster and with far less investment" (TESLA battery deck P5)

The pathway material



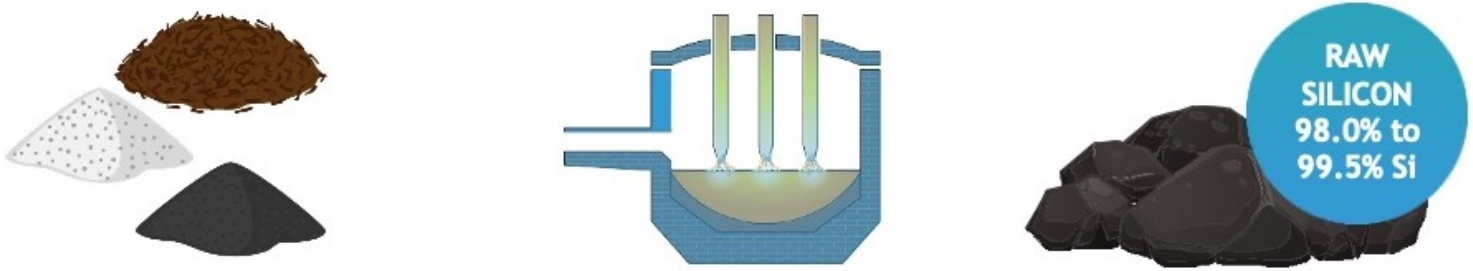
SILICON

AWESOME YES, INEXPENSIVE?

Silicon may be the most abundant element in earth's crust after oxygen, but like all other energy metals (lithium, graphite, cobalt, nickel and others):

- It does not exist in its pure state!
- Expensive carbothermic process needed to extract it from Quartz

Quartz (SiO_2) to Raw Silicon (Si) - Conventional Carbothermic Process



SiO_2 99.5% + Low Ash Coal + Wood Chips 6 MT Needed → Electric Arc Furnace → Energy Consumption: 12,000 kWh/t 1 MT Produced

RAW SILICON MUST BE TRANSFORMED AND/OR ENGINEERED BEFORE IT CAN BE USED FOR BATTERY APPLICATIONS

HPQ WORLD CLASS SILICON R&D CONSORTIUM

WORKING TO SOLVE RENEWABLE ENERGY CHALLENGES

PYROGENESIS **A high-tech company that is a leader in the design, development, manufacture & commercialization of advanced plasma processes & products (TSX Listed, Listing on NASDAQ in Q1 2021)**

APOLLON SOLAR DEPUIS 2001 **A French Engineering and R&D Company fully dedicated to the field of energy transition**

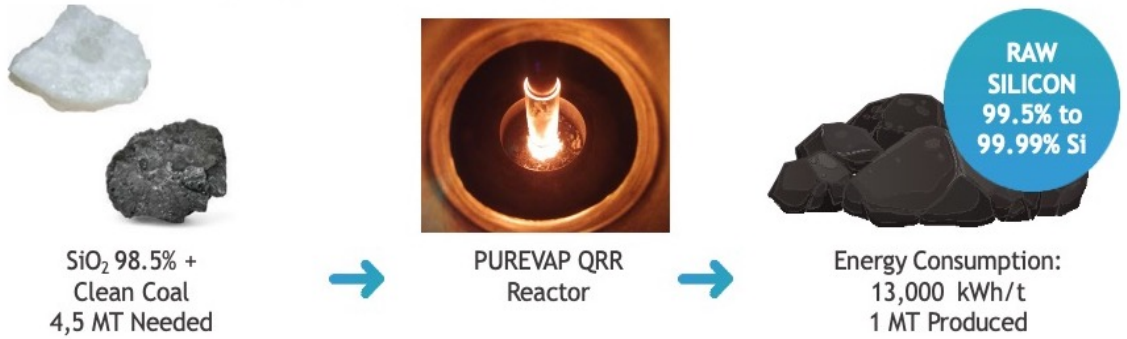
- Created in 2001 by a team of engineers & scientists with a longstanding expertise in Silicon Purification, Crystallisation - Photovoltaic Cells and Modules – Producing Hydrogen (H2) from Silicon by hydrolysis & 23 patents in their name.

HPQ IS COMMERCIALIZING LOW-COST SOLUTIONS

STARTING COMMERCIAL VALIDATION OF LOW-COST PROCESSES

With PyroGenesis, HPQ is developing:

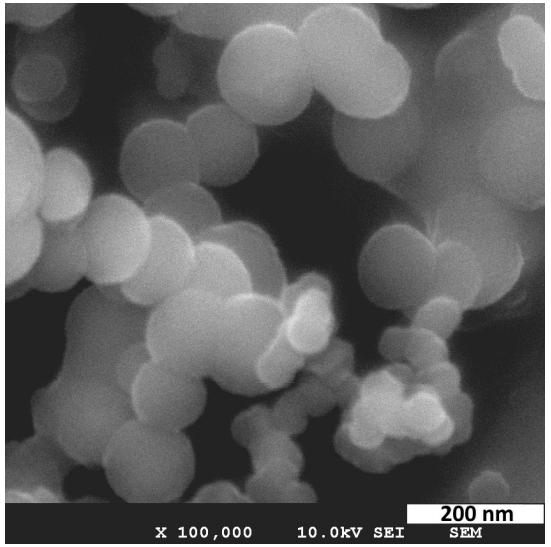
Quartz (SiO_2) to Raw Silicon (Si) - PUREVAP™ QRR Process



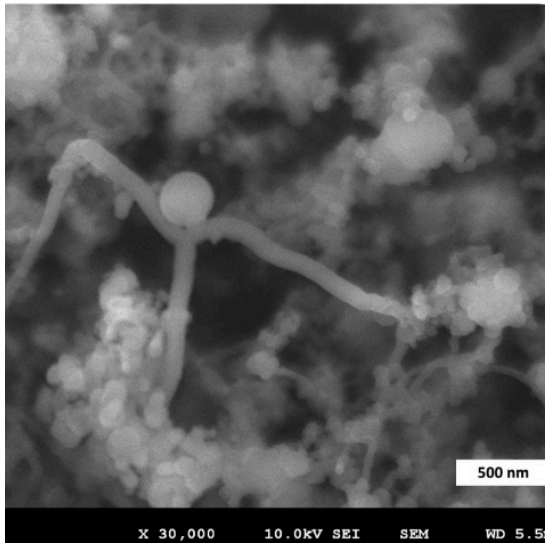
A new scalable, versatile, low CAPEX & OPEX carbothermic process

SILICON (Si) to NANOPOWDERS AND NANOWIRES - PUREVAP™ NSiR Process

A new scalable, versatile, low-cost plasma process with a capability to produce tailor made spherical Si materials from < 0.20 µm up to 5 µm



SILICON NANOPOWDERS



SILICON NANOWIRES

Material produced by PyroGenesis during proof of concept test

With Apollon Solar, HPQ is:

- Deploying its patented process to develop a capability to produce nano porous silicon (Si) powders using *PUREVAP™ QRR* Silicon (Si) as feedstock.
- Exploring the technical and commercial potential of making a new generation of environmentally friendly silicon nano powders to produce hydrogen by hydrolysis with the Apollon GennaoTM system.

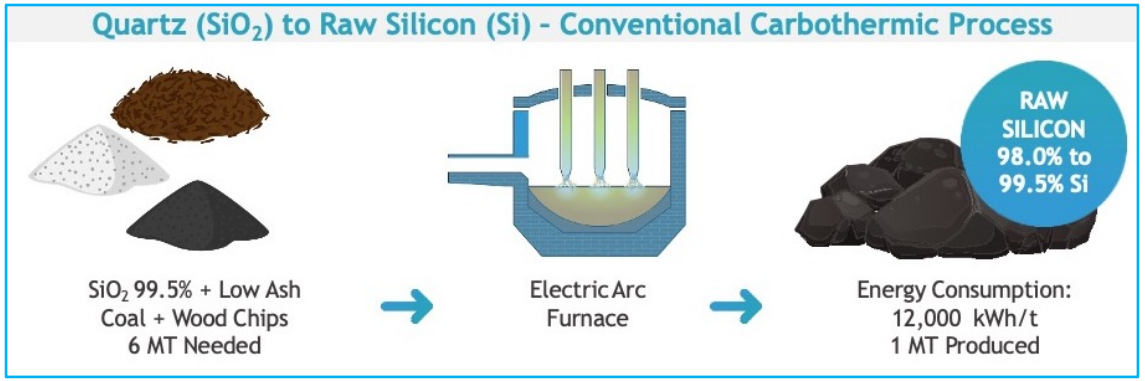
HPQ IMPLEMENTATION PLAN

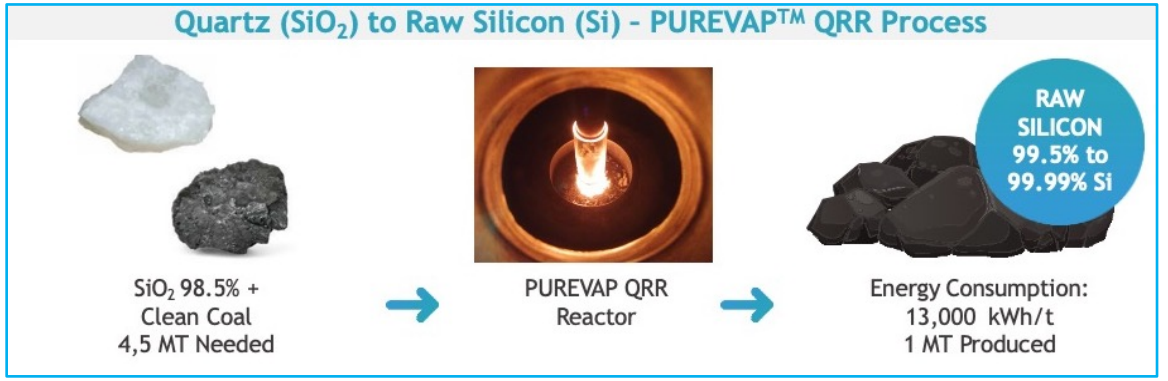
OVER THE NEXT 12 MONTHS, FAST TRACKING Si INNOVATION

- Lab scale and proof of concept tests already completed
- Fully funded QRR pilot plant and NSiR testing program
- Getting ready to go live and produce:
  - Spherical Silicon Nano & Micron powders for Li-ion Batteries
    - ✓ ***Material potential already generated NDA's with battery manufacturers and advance material companies***
    - ✓ ***Received a firm order for Si Nanopowders from major car manufacturer***
  - Silicon Nanowires for Li-ion Batteries
  - Spherical Silicon Nanopowders for Hydrogen (H_2) production
  - High Purity Nano Porous Silicon Powders for Li-ion Batteries
  - Raw Silicon (99.5% Si up to 99.99% Si) for specialty applications

PUREVAP™ QRR – THE ORIGINAL BREAKTHROUGH

THE PUREVAP™ QRR: GAME CHANGING VERSATILITY VERSUS CONVENTIONAL PROCESS





PUREVAP™ QUARTZ REDUCTION REACTOR (QRR) SCALABILITY AND CAPEX ADVANTAGES:

- New conventional plants are scalable by minimum increments of 30,000 MTY
  - Conventional plant set-up limit 2N+ Si production at 40% of plant output
- *PUREVAP™ QRR* process is scalable by increments of 2,500 MTY
- *PUREVAP™ QRR* match the CAPEX per Kg costs of Tier 1 producers for less investment (85% - 90% less)
  - *PUREVAP™* QRR CAPEX per Kg of annual capacity reaches US$ 6.22 for a (2) 2,500 MTY Plant
  - Rima Subsidiary, Mississippi Silicon, paid US$ 6.11 per per Kg of annual capacity in 2015 to build a 36,000 MT annual capacity Raw Silicon plant. This represented a > US$ 200M investment

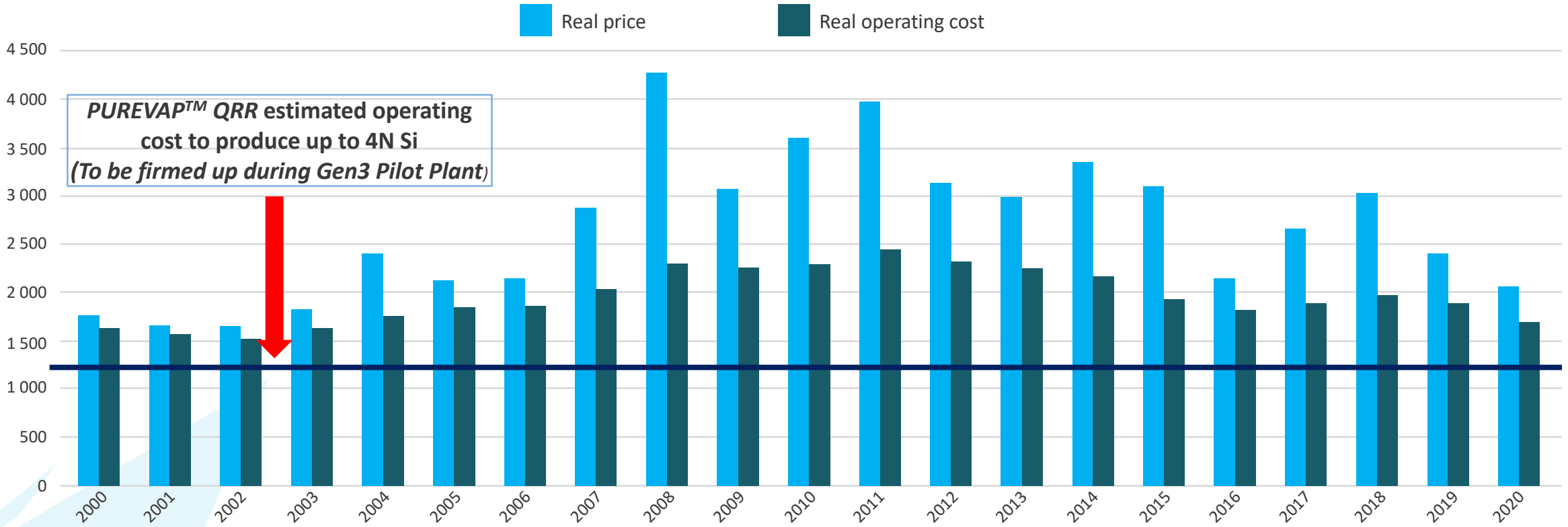
PUREVAP™ QRR – LOW COST, LOW EMISSIONS

PUREVAP™ QRR OPEX VERSUS CONVENTIONAL Si PRODUCERS

Silicon in the 2020s

Inflation-adjusted prices are higher than they were in the early 2000s

US spot price of 5.5.3 grade silicon vs. avg. operating cost at plants outside China and the CIS in real terms, $/t



Data: CRU

HPQ – OPPORTUNITIES IN SILICON BUSINESS

Usages

Metallurgical Grade Si
(98.0% - 98.9% Si)

Chemical Grade Si
(99.0% - 99.5% Si)

Global Megatrends

Megatrends	Implications	End Customer Product
Population Growth	Growing middle class China and India: consumption economy	• Silicones: healthcare, cosmetics, packaging
Urbanization	India, Brazil and other emerging markets: infrastructure build	• Silicon: aluminum for cars, housing growth • Silicon: Silicone sealants for construction
Energy Efficiency	Reduce weight of vehicles and Electric vehicles	• Silicon as alloying agent for aluminum to replace steel in vehicles • Prospects for silicon alloys in batteries
Alternative Energy & Sustainability	Growing demand for solar and other sources of renewable energy	• Silicone sealants for wind turbine and solar • Higher consumption of silicon for polysilicon used to make solar cells • Prospects for silicon Base Energy Storage

DEMAND TO REACH 3.8 M MT WORTH ABOUT US$ 10 BILLION BY 2025 (CRU)

- NEW PLANTS NEEDED TO MEET DEMAND GROWTH
- GROWTH WILL BE DRIVEN BY DEMAND FOR CHEMICAL GRADE SILICON (2N+ Si)
  - Used as feedstock to make Silicones
  - Used as feedstock to produce Polysilicon (for both Siemens and FBR processes)
  - Transformed into Silicon powder (1 μm to 5 μm) used in specialty applications
  - Used as feedstock to make engineered Silicon for battery applications

PUREVAP™ QRR – FOUR YEARS IN THE MAKING

INDICATIVE SCALING-UP PATHWAY

Proof of concept completed in 2016

Design Capacity

Traces

Phase 1
Bench Tests
Gen 1 QRR completed in 2016

Grams per Tests

Phase 2
Proof of Commercial Scalability *Gen 2 QRR Completed in 2017*

Phase 3
Pilot Plant *Gen 3 QRR Engineering-Design process & financing completed 2018-2019*

10 kg per Month

Phase 3
Pilot Plant
Commissioning and commercialization 2021-2022

4,000 kg per Month

Phase 4
Commercial Plant
Gen 4 QRR
2023 -

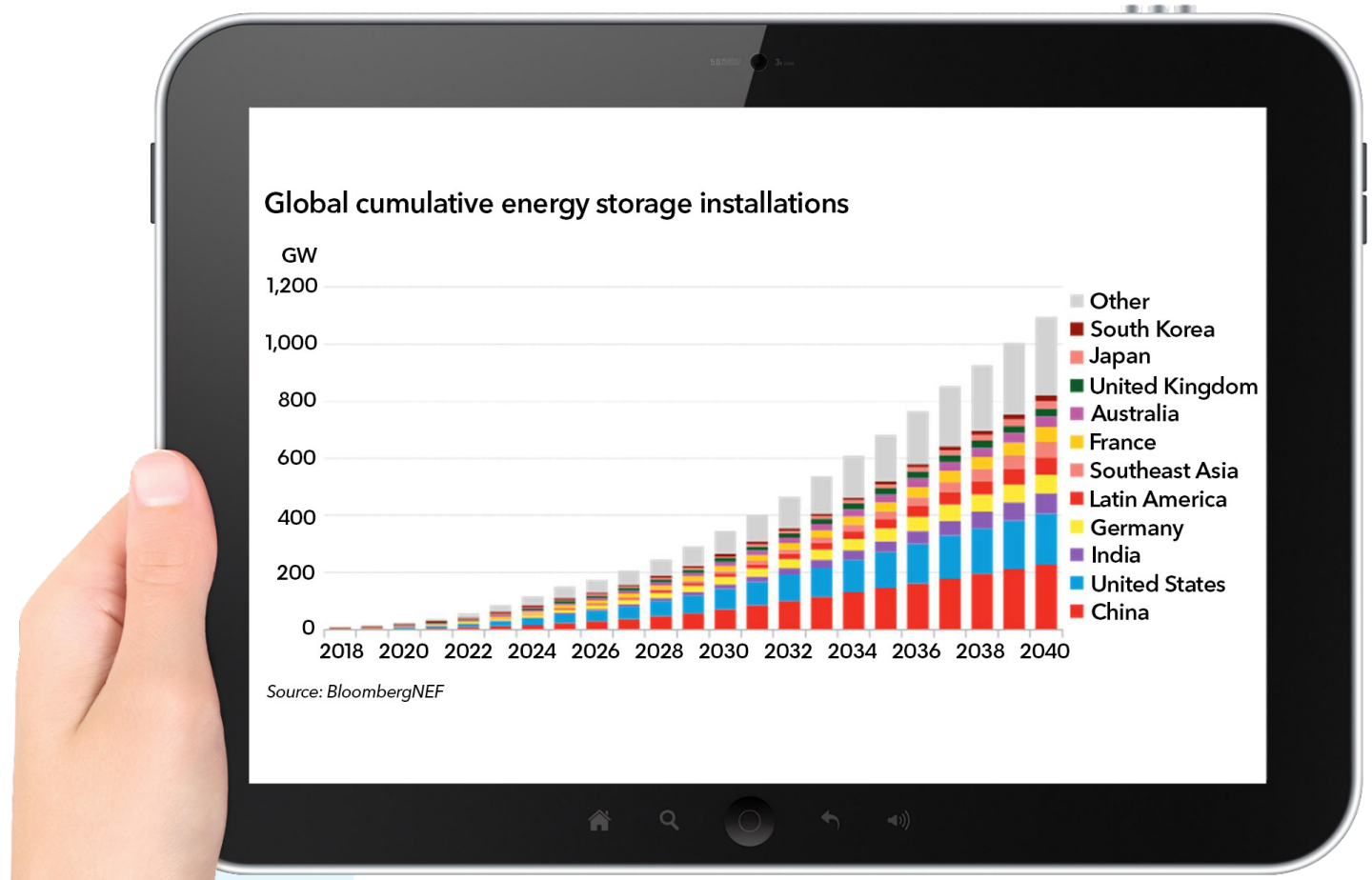
200 MT per Month

Batch Process

Semi-Continuous Processes

ENERGY STORAGE – THE NEXT GEN SILICON USE

DEMAND FOR ENERGY STORAGE CAPACITY MUST INCREASE TO OFFSET THE VARIABILITY OF RENEWABLE ENERGY GENERATION IN THE ELECTRICITY ECOSYSTEM



"Investment dedicated to energy storage will exceed $40 billion by 2040 "
Yayoi Sekine, energy storage analyst for BNEF

TO MEET DEMAND THE WORLD NEEDS BETTER BATTERIES!

BATTERY PERFORMANCE HAS EVOLVED MUCH MORE SLOWLY THAN ELECTRONICS AND COMPUTERS

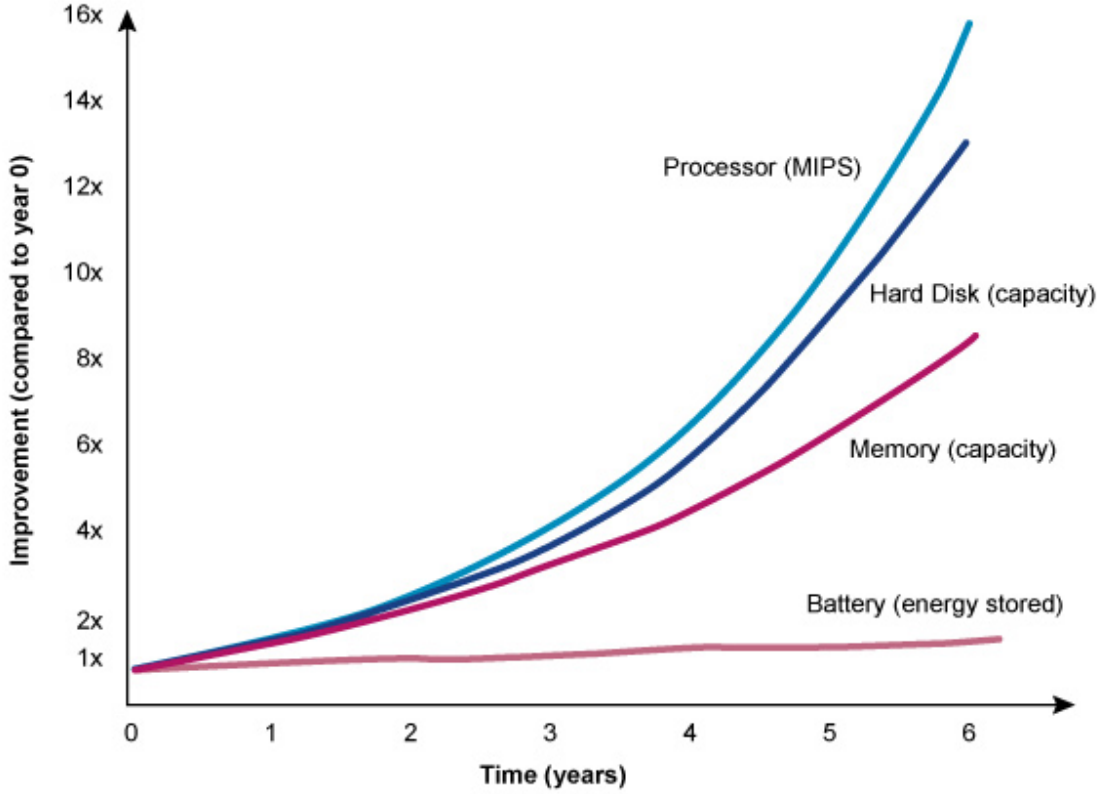
Improvements have been made in battery technology, but they have not kept pace

Why Is Battery Technology Evolving So Slowly?

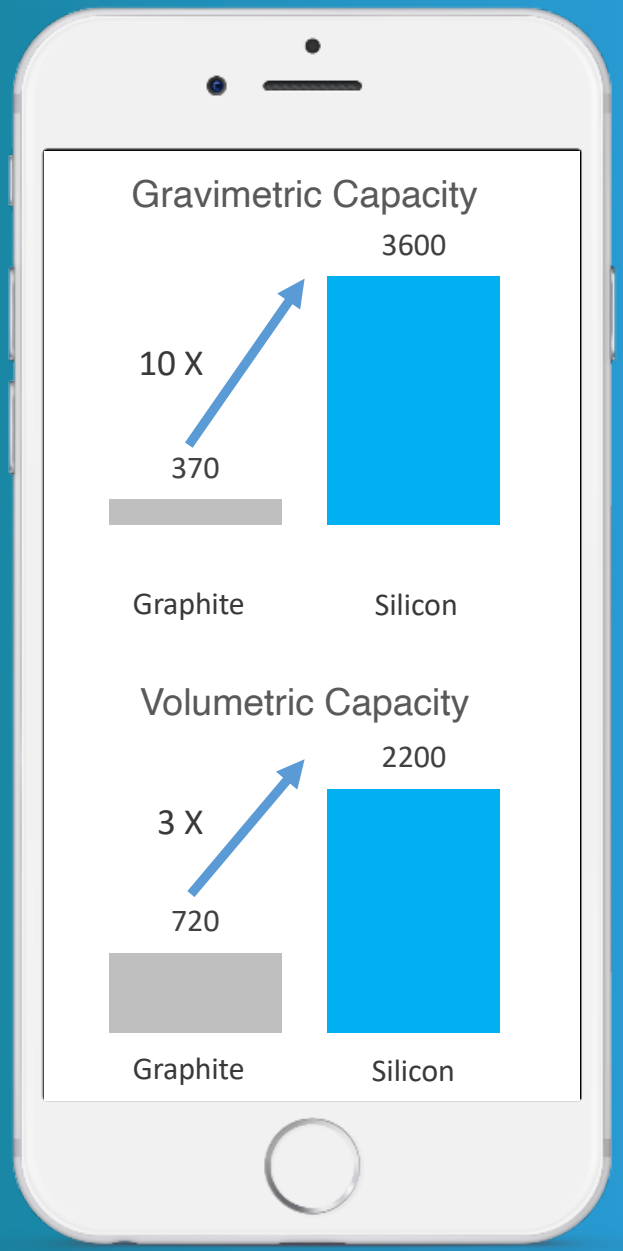
The main reason for the slow pace in batteries is due to chemistry:

- **Electronics improve by shrinking physical circuits** enabling manufacturing technology to evolve rapidly.
- **Batteries improve by making advances in chemistry and materials science**.

Many of the chemical processes used in modern batteries have reached their limits; improvements needed from material science research work!



The problem is not *"Can we get a battery that is powerful?"*, It's:
*"Can we make that **battery cheap enough to build trillions of them?**"*
Alexander Girau, Advano's founder & CEO



THE LIMITING FACTOR

THE LIMITING FACTOR OF LITHIUM-ION BATTERIES IS THE AMOUNT OF LITHIUM THAT CAN BE HELD IN THE BATTERY'S ELECTRODES

- In conventional batteries, the negative electrode or anode is made of carbon in the form of graphite.
- Silicon allows for faster charging and higher storage capacity than graphite; therefore.

SILICON (Si) IS NEEDED TO BREAK LI-ION BATTERIES' LIMITATIONS

Tesla's latest battery day presentation confirmed that the future of battery anodes will include Silicon. Tesla "*…plans on removing graphite from the anode.*" (**NBCFM September 23, 2020 Research Flash)**

"Silicon anodes are generally viewed as the next development in lithium-ion battery technology … Silicon's ability to absorb more charge translates to longer battery life and smaller batteries."
(Yury Gogotsi, Director, A.J. Drexel Nanomaterials Institute, Drexel University)

THE CHALLENGES

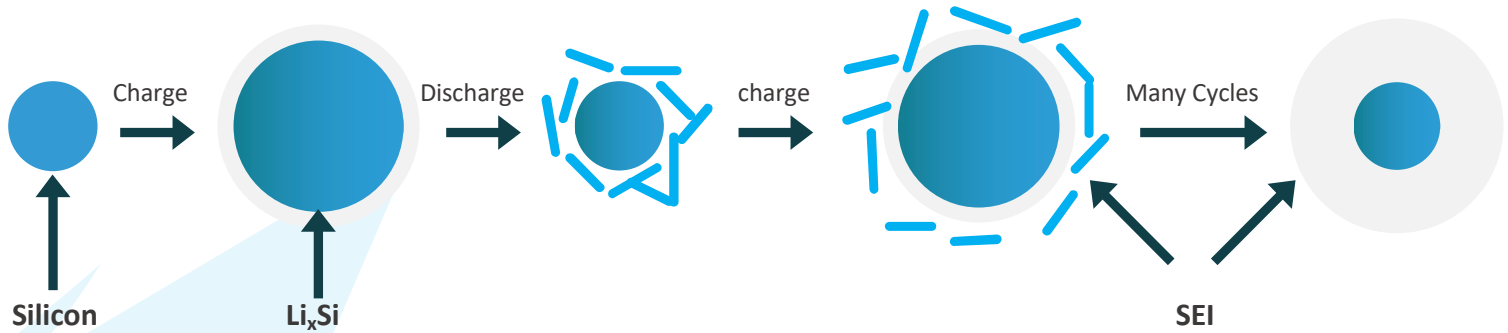
DEPLOYMENT OF SILICON (Si) IN BATTERIES FACES CHALLENGES

THE BIG ONE

- The volumetric fluctuations (>300 %) of Silicon (Si) during charge/discharge cycles leads to irreversible energy storage capacity loss.

WHY

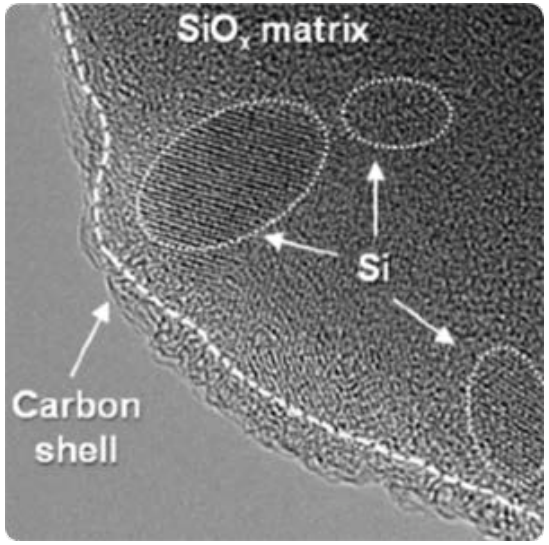
- Repeated exposure of the fresh silicon surface to battery electrolyte leads to a continual reformation of the Solid electrolyte interphase (SEI);
- Basically, the SEI grows thicker with each charge/discharge cycle.



RESULTING IN POOR BATTERY LIFE CYCLE

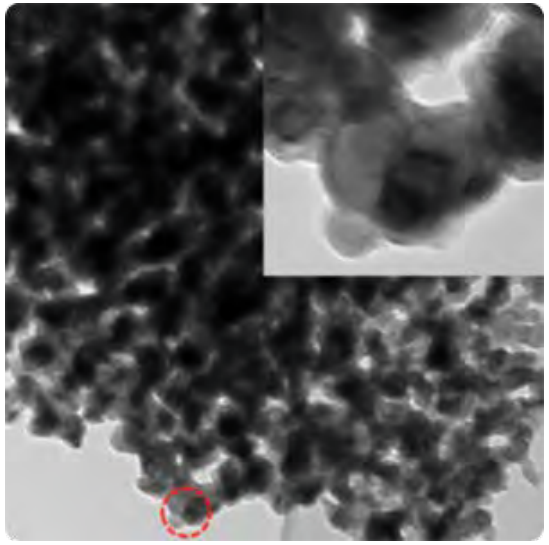
MATERIAL SOLUTIONS NOT ECONOMICALLY VIABLE

CURRENT APPROACHES TO SILICON USE HIGHLY ENGINEERED AND EXPENSIVE MATERIALS



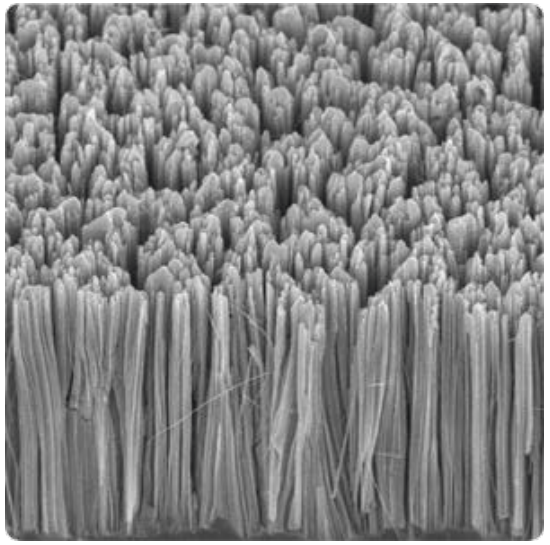
SILICON STRUCTURED IN SIO GLASS

> 2,000 US$ / Kg



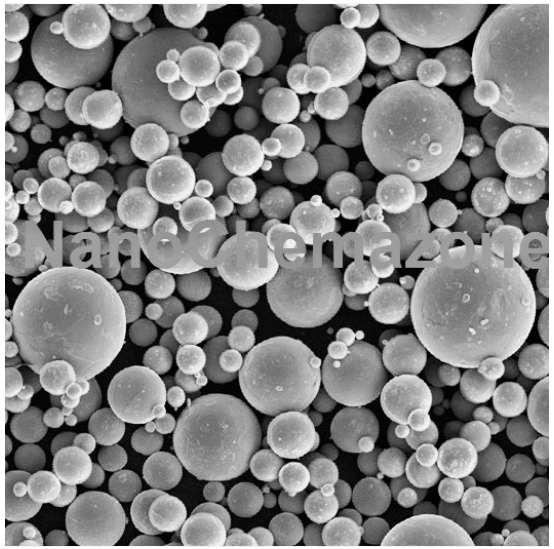
SILICON STRUCTURED IN GRAPHITE

> 3,000 US$ / Kg



SILICON NANOWIRES

> 30,000 US$ / Kg



SILICON NANOPOWDERS

> 20,000 US$ / Kg

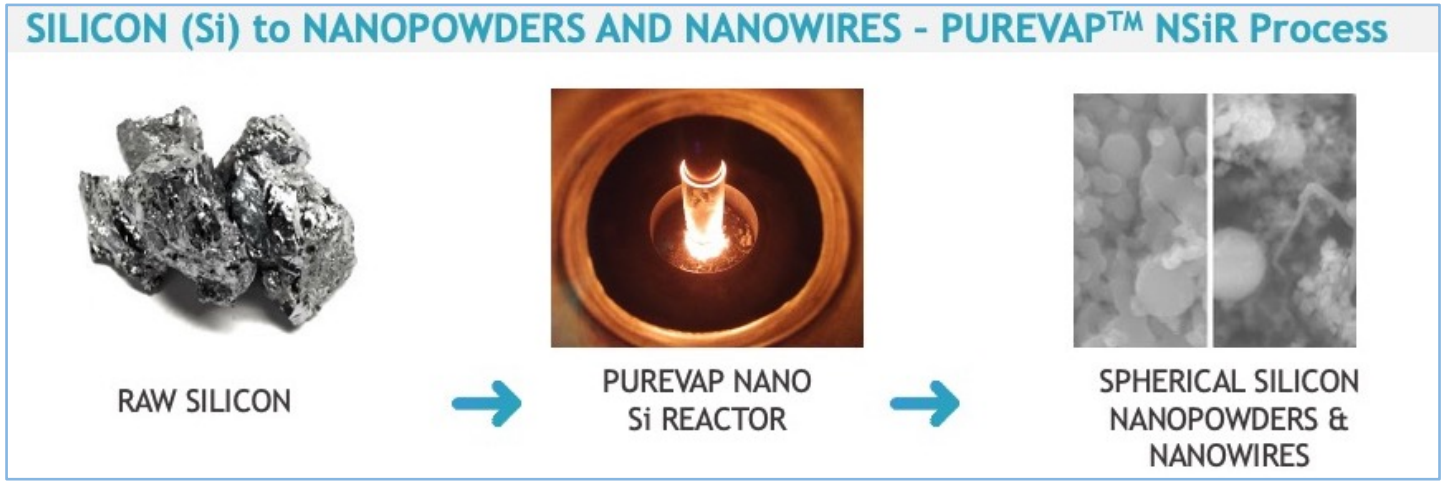
Presently:
- Silicon is used in a blended form with graphite
- Typically only represents around 5% by wt
- Limiting performance improvements achieved to date

Silicon Nanopowders or Nanowires could replace graphite now
- Graphite for anode cost from US$10 to US$20 per Kg
- Silicon Nanopowders or Nanowires need to reach cost parity with graphite to go mainstream

PUREVAP™ NANO Si REACTOR (NSiR), SOLVING THE BIG PUZZLE IN ENERGY STORAGE

PYROGENESIS THE LEAD MEMBER OF HPQ SILICON R&D CONSORTIUM

- With more than 20 years of experience developing and using plasma atomization to make metal powders for 3D printing, the PyroGenesis technical team developed a new low-cost plasma based process to transform Raw Silicon into **tailor-made Silicon materials (from < 0.20 μm up to 5 μm)** for which battery and Electrical vehicle manufacturers are searching.
- **The goal: Making Silicon material that can achieve cost parity with graphite**

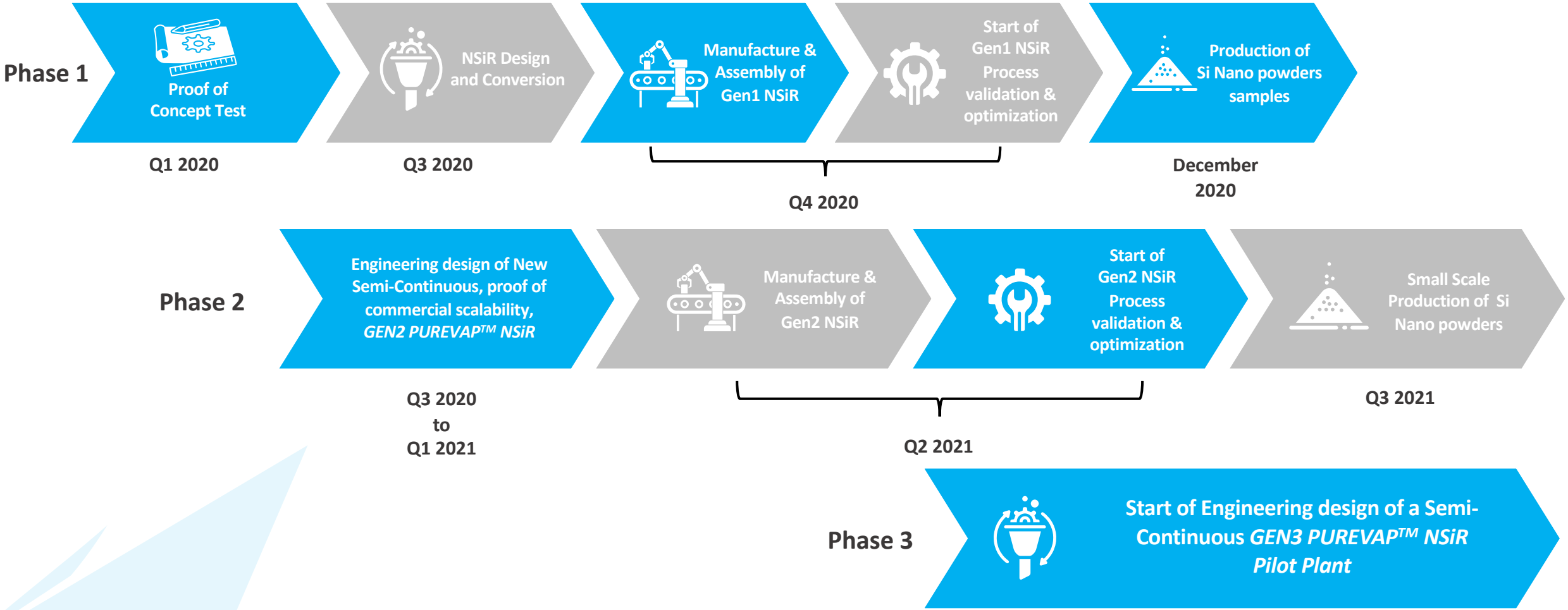


Order of magnitude of the addressable market for Silicon material needed by the energy storage sector:

- As per BloombergNEF (GWh) projection, by 2040 demand for battery grade Silicon material could exceed 900K MT
  - Assuming that a thousand (1K) MT of Silicon material stores 5 gigawatt hours (GWh) of energy

PUREVAP™ NSiR PATHWAY FORWARD

PROJECT MILESTONES AND INDICATIVE TIMELINE



PUREVAP™ NSiR SCALABLE & LOW-COST

Indicative Scaling-up Pathway

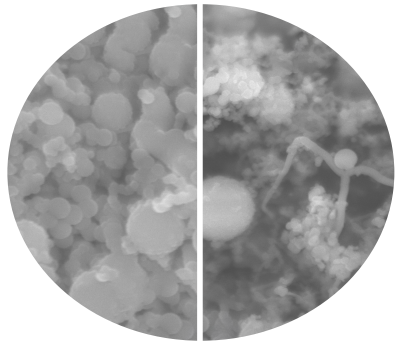
Proof of concept
GEN2 QRR

Phase 1
Bench Tests
Gen 1 NSiR

Phase 2
Proof of Commercial Scalability
Gen 2 NSiR

Phase 3
Pilot Plant
Gen 3 NSiR

Phase 4
Commercial Plant
Gen 4 NSiR



Batch Process

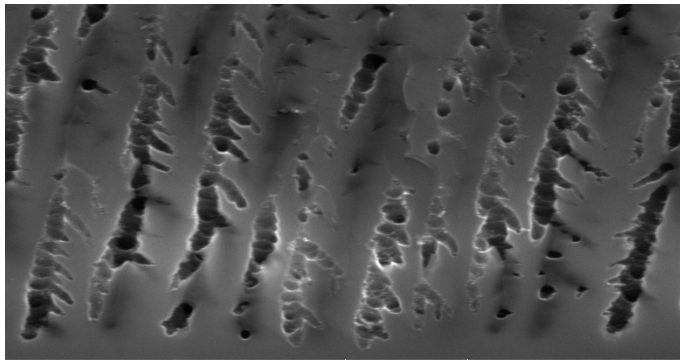
Semi-Continuous Processes

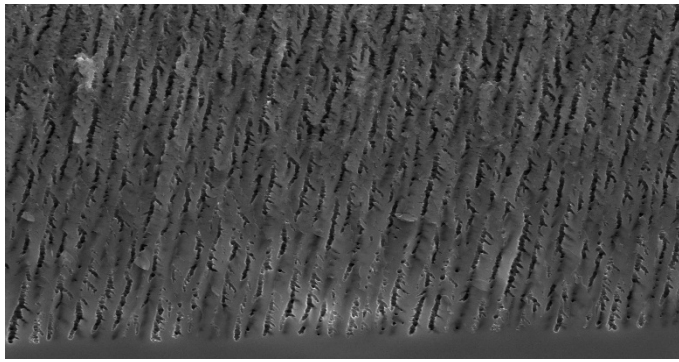
Design Capacity	Traces	30 Kg per Month	300 kg per Month	4,000 kg per Month	200 MT per Month

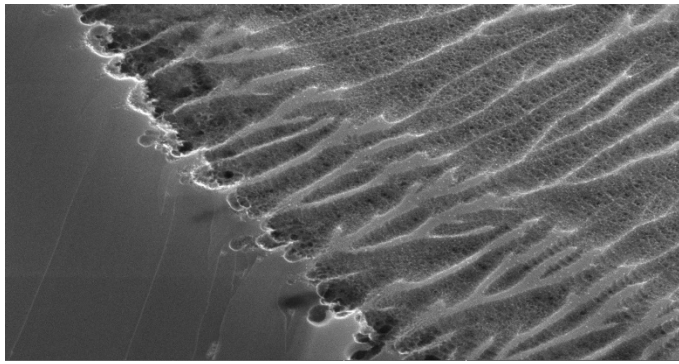
THE HPQ – APOLLON POROUS SILICON ADVANTAGE

A KEY MEMBER OF HPQ SILICON R&D CONSORTIUM

- Apollon and partners[1] designed and patented, in 2012, a porous silicon production process based on electrochemical anodization of silicon wafers made from metallurgical grade raw Silicon.
- The manufacturing process develop by Apollon can produce porous Silicon nanopowders of different sizes (2 nm to 1 µm) and pore structures (Microporous (<5nm), Mesoporous (5nm – 50nm) or Macroporous (>50nm)).
- HPQ's *PUREVAP™ QRR* ability to produce raw Silicon (Si) at the lowest cost in the industry represents a unique competitive advantage in the porous Silicon space.
- Going forward, HPQ and Apollon plan to qualify that advantage in the following markets segments:
  - Nano porous Silicon powders and wafers for the battery markets
  - Nano porous Silicon powders for the Hydrogen (H_2) sectors
  - Nano porous Silicon materials for the other high value application







1: CNRS (Centre National de la Recherche Scientifique) and INSA Lyon (Institut National des Sciences Appliquées)

THE HPQ – APOLLON POROUS SILICON ADVANTAGE

HPQ *PUREVAP™ QRR* AND APOLLON PATENTED LOW-COST APPROACH OF MAKING POROUS SI

PUREVAP™ QRR

PUREVAP™ QRR Si

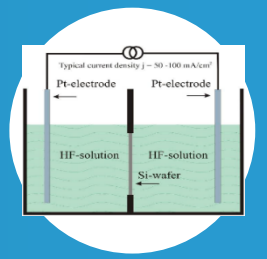
CRYSTALLIZATION

Si INGOTS

WAFERING

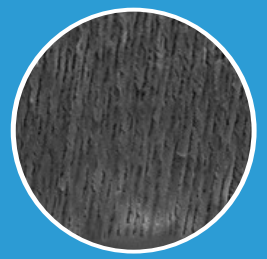
Si WAFERS

ANODIZATION



Apollon Patented Process

POROUS Si WAFER



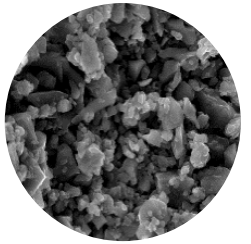
crushed into Nano Porous Si

PROCESS FLOW BETWEEN *PUREVAP™ QRR* AND ANODIZATION:

- Easy to scale-up, based on equipment and processes used in the Solar Industry

ANODIZATION:

- Only part of the process that requires R&D for commercial scale-up!



HPQ AND APOLLON WORKING ON

- Re-starting lab-scale anodization cell equipment
- Producing Nano porous Silicon powders and wafers to be tested for battery applications
- Evaluating different carbon coating process for Silicon nano powders (porous or not)

WHY INVEST IN HPQ SILICON?

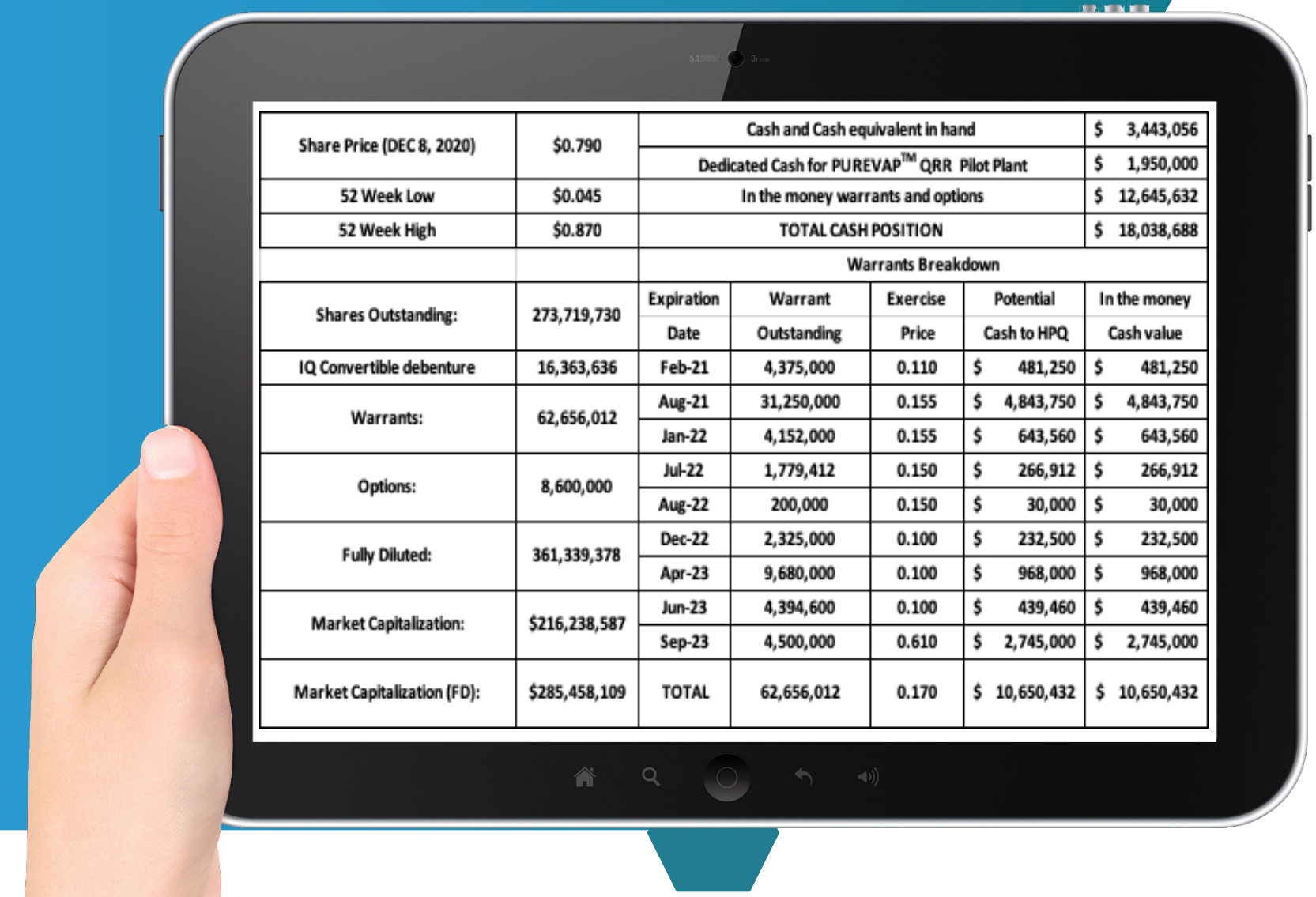
UBS estimates that over the next ten years, the energy storage market in the United States alone could grow to as much as $426 billion, and there are many ways to buy into the surge! (CNBC Dec 30, 2019)

HPQ – SILICON: AN INVESTMENT OPPORTUNITY TO PARTICIPATE IN THE SURGE!

- **During December 2020, ready to go live and start producing:**
  - Spherical Silicon Nano & Micron powders for Li-ion Batteries
    - ✓ ***Material potential already generated NDA's with battery manufacturers and advance material companies***
    - ✓ ***Received a firm order for Si Nanopowders from major car manufacturer***
  - Silicon Nanowires for Li-ion Batteries
  - Spherical Silicon Nanopowders for Hydrogen (H_2) production
  - High Purity Nano Porous Silicon Powders for Li-ion Batteries
  - Raw Silicon (99.5% Si up to 99.99% Si) for specialty applications
- **Supported by two (2) world class technology partners**

HPQ Share Performance 6 months

HPQ CAPITAL STRUCTURE



Share Price (DEC 8, 2020)	$0.790	Cash and Cash equivalent in hand				$ 3,443,056
		Dedicated Cash for PUREVAP™ QRR Pilot Plant				$ 1,950,000
52 Week Low	$0.045	In the money warrants and options				$ 12,645,632
52 Week High	$0.870	TOTAL CASH POSITION				$ 18,038,688
		Warrants Breakdown				
Shares Outstanding:	273,719,730	Expiration Date	Warrant Outstanding	Exercise Price	Potential Cash to HPQ	In the money Cash value
IQ Convertible debenture	16,363,636	Feb-21	4,375,000	0.110	$ 481,250	$ 481,250
Warrants:	62,656,012	Aug-21	31,250,000	0.155	$ 4,843,750	$ 4,843,750
		Jan-22	4,152,000	0.155	$ 643,560	$ 643,560
Options:	8,600,000	Jul-22	1,779,412	0.150	$ 266,912	$ 266,912
		Aug-22	200,000	0.150	$ 30,000	$ 30,000
Fully Diluted:	361,339,378	Dec-22	2,325,000	0.100	$ 232,500	$ 232,500
		Apr-23	9,680,000	0.100	$ 968,000	$ 968,000
Market Capitalization:	$216,238,587	Jun-23	4,394,600	0.100	$ 439,460	$ 439,460
		Sep-23	4,500,000	0.610	$ 2,745,000	$ 2,745,000
Market Capitalization (FD):	$285,458,109	TOTAL	62,656,012	0.170	$ 10,650,432	$ 10,650,432

MANAGEMENT, BOARD & KEY INVESTORS

Management

Bernard J Tourillon, BAA, MBA
Chairman, President, CEO and Director

Patrick Levasseur
Vice-President, COO and Director

Noelle Drapeau, LLL, MBA, PMP
Corporate Secretary and Director

Francois Rivard
CFO

Independent Directors

Richard Mimeau, B.Sc.
Director

Peter Smith, PhD, P. Eng.
Director

Robert Robitaille, M.B.A., L. Ph.
Director

Daryl Hodges H. BSc, M.Sc.
Director

Major Investors

Management & Board	≅ 9.0%	≅ 10.5% (FD)
PyroGenesis	≅ 9.8%	≅ 14.0% (FD)
Investissement Québec		≅ 9.0% (FD)
Strategic Investors	≅ 1.2%	≅ 1.7% (FD)
Key Investors	≅ 17.5%	≅ 19.2% (FD)

CONSULTANTS, TRANSFER AGENT AND AUDITORS

Consultants/ Technical Advisors

Marcel Drapeau, BA, BSC. Comm, LLL

PyroGenesis Canada Inc

Apollon Solar Sa

Transfer Agent

Computershare

Auditors

KPMG S.E.C.N.R.L.

CONTACT

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RESOURCES

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SILICON POWDERS INC

APPENDICES

HPQ Building a World Class Silicon R&D Cluster

With Technology Partner PyroGenesis Canada Inc, HPQ is developing:

The *PUREVAP™ Quartz Reduction Reactor (QRR)* (Patent Pending)

The *PUREVAP™ Nano Silicon Reactor (NSiR)* (Provisional Patent Filed)

PYROGENESIS Plasma Expertise: One of the largest in the World

- +25 years of experience & > 70 employees
- >60 Patents worldwide (issued or pending)
- 40,900 ft² Manufacturing facility
- Contract Backlog in excess of $36MM
- World Leader In Advanced Plasma Processes
- Technology Sold To US Navy For Use On Aircraft Carriers
- Technology Tested and Validated By DARPA
- Leaders in High Purity Spherical Metal Powders for Industrial 3D printing
- Developer of PUREVAP One-Step Process To Produce High Purity Silicon
- Developer of DROSRITE™: a Green Aluminum Recovery from Dross process
- Agreements With Global Manufacturers and Trading Houses

HPQ Building a World Class Silicon R&D Cluster

With Technology Partner Apollon Solar sas, HPQ is developing:

- A lower cost approach to make nano-porous silicon powders using Apollon patented process to make porous Si using *PUREVAP™ QRR* Silicon (Si) as feedstock.
- Exploring the technical and commercial potential of making a new generation of environmentally friendly silicon nano powders to produce hydrogen by hydrolysis for Apollon GennaoTM system .

APOLLON SOLAR DEPUIS 2001

A French Engineering and R&D Company fully dedicated to the field of energy transition

Created in 2001 by a team of engineers and scientists with longstanding expertise in Silicon Purification, Crystallisation - Photovoltaic Cells and Modules – Producing Hydrogen (H_2) from Silicon by hydrolysis

Part of the YXENS group, active in Fine Chemistry, Aromatic & Renewable Energies

23 Patents to their name

Obtained, an independently confirmed, world record conversion efficiency of 22.6% with ANU University of Australia, using monocrystalline ingots, for a solar cell made with 100% “SoG Si UMG”