CELTIC-NEXT
Proposers Day

7th of September 2022, Online via WebEx

Pitch of the Project Proposal

VACUSTORAGE

Latheacond Technologies

Dr. Isakov Dmitry, Director
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Teaser

Today postharvest losses amount due to inefficiency of traditional cold storage are significant and prohibitive

- *UN predicts 70% increase in food demand by 2050 but currently almost **50%** of agricultural products never reaches consumers – losses of more than **$1 Trillion per year** globally*
- *UN also estimates that in developing countries traditional refrigeration sector can consume up to **40%** of total national electricity demand*

*Vacuum cold storage outperforms traditional refrigerated storage by up to **x7***
*Low adoption due to **LARGE WEIGHT, HIGH COST AND HIGH ENERGY DEMAND***

*At Latheacond we have developed a new VACUSTORAGE solution that has benefits of vacuum without penalty on **WEIGHT**, **COST** and **ENERGY***

Adoption of ***VACUSTORAGE*** *by cold supply chain require SMART control to ensure reliability and ease of use*

Organisation Profile

Dr. Isakov Dmitry

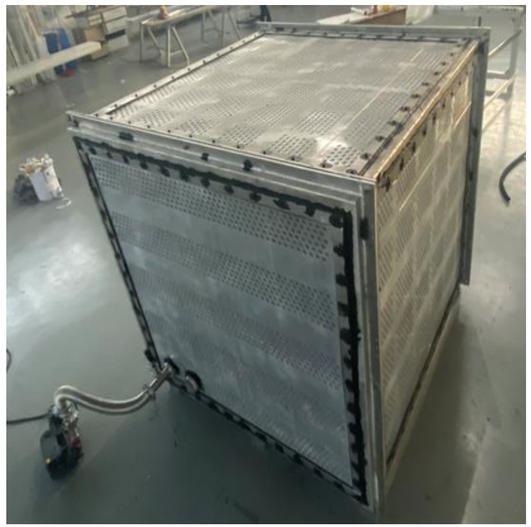
Academic qualifications:
M.Sc.(Physics), Ph.D. (Engineering)

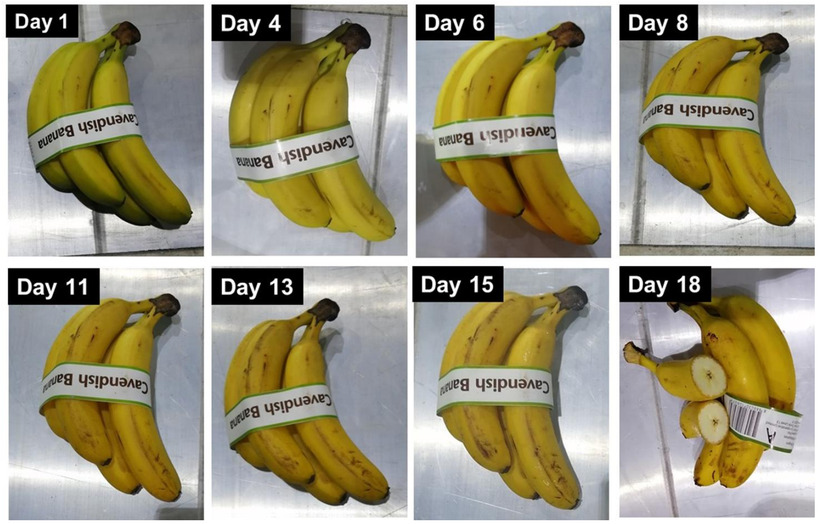
Work experience:
*Scientist in A*STAR for 11 years*
CEO of Latheacond Technologies for 4 years
Local and International R&D Awards: 7

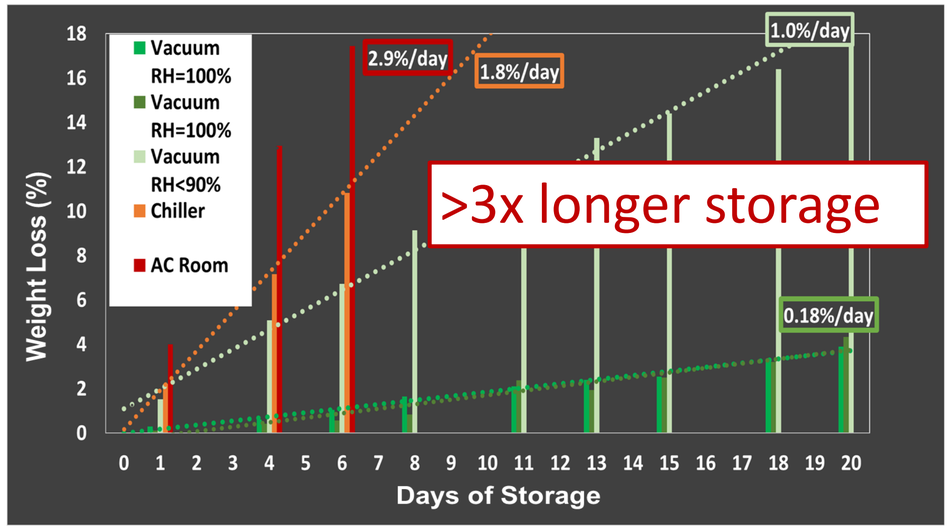
Latheacond Technologies

- *4 patents, 8 Know-How*
- *Funds raised: >S$1,200,000*
- *Current Headcount: 3*
- *On-going R&D projects: 2*
- *Areas of R&D: Cold Supply Chain, Energy efficiency*

Proposal Introduction







Vision

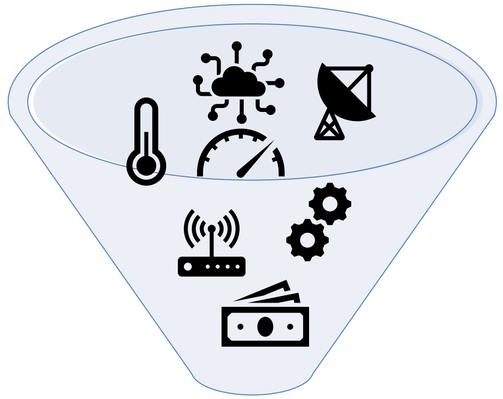
Innovation

- *Customized SMART and IoT system*
- *In vacuum environmental modifier for optimum residual atmosphere control*

- *Higher food security in the world*
- *Reduced environmental footprint of cold supply chain*

Proposal Introduction

- *Develop cost effective sensing suitable for low pressure environment (<0.2 atm)*
  - *Mapping and visualization of latent heat transfer*
  - *Mapping and visualization of temperature and pressure non-uniformities*
  - *Non-chemical detection of trace gases (CO2, Ethylene, CH4, etc)*
- *Develop cost effective SMART controller and IoT link*
  - *Library of critical parameters (cargo specific)*
  - *Power or speed control for pumps and compressors*
- *Develop industry ready operations and business model*



Superior cold supply chain

Duration 24-36 month

Partners

We are supported by Yan San Metals Pte Ltd for main chamber manufacturing and cost optimization

We look for partners to develop SMART and IoT systems for VACUSTORAGE increased reliability and ease of use.

We look partners from cold supply chain for developing operations based on VACUSTORAGE compliant with industry standards and regulations

We also invite food science experts for developing optimum recipes for food storage in low pressure environment.

Contact Info

For more information and for interest to participate please contact:

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Presentation available via: