AUS4INNOVATION

Aus4Innovation Newsletter

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Contents

research.csiro.au/aus4innovation
aus4innovation@csiro.au

Introduction

Dear friends and innovators,

As we usher in the Lunar New Year of the Snake, we extend our warmest wishes for prosperity, wisdom, and success to each of you. For it is a time of renewal and reflection, and what better way to celebrate than by embracing the rich tapestry of traditions and aspirations that guide us forward?

We are thrilled to announce that the Aus4Innovation newsletter is returning on a biannual basis! This is an opportunity for us to take a retrospective look into the activities and their impact across the past six months of our journey together, showcasing our milestones, learnings, and plotting the course for the future.

This issue introduces a theme very close to our hearts - '*Back to our Roots.*' It is a thoughtful exploration of the foundational values we hold dear: **transparency, integrity, partnership, and compassion.** Australia's national science agency, CSIRO, and Aus4Innovation are committed to embodying these principles in all we do, and throughout this edition, you'll find stories and insights that truly reflect these core values.

We invite you to join us as we delve into the essence of what makes our partnership strong and our mission resolute. Together, let's continue working closely together on meaningful innovations with unwavering dedication to make a difference.

Warm regards,

The Aus4Innovation Team

Insights

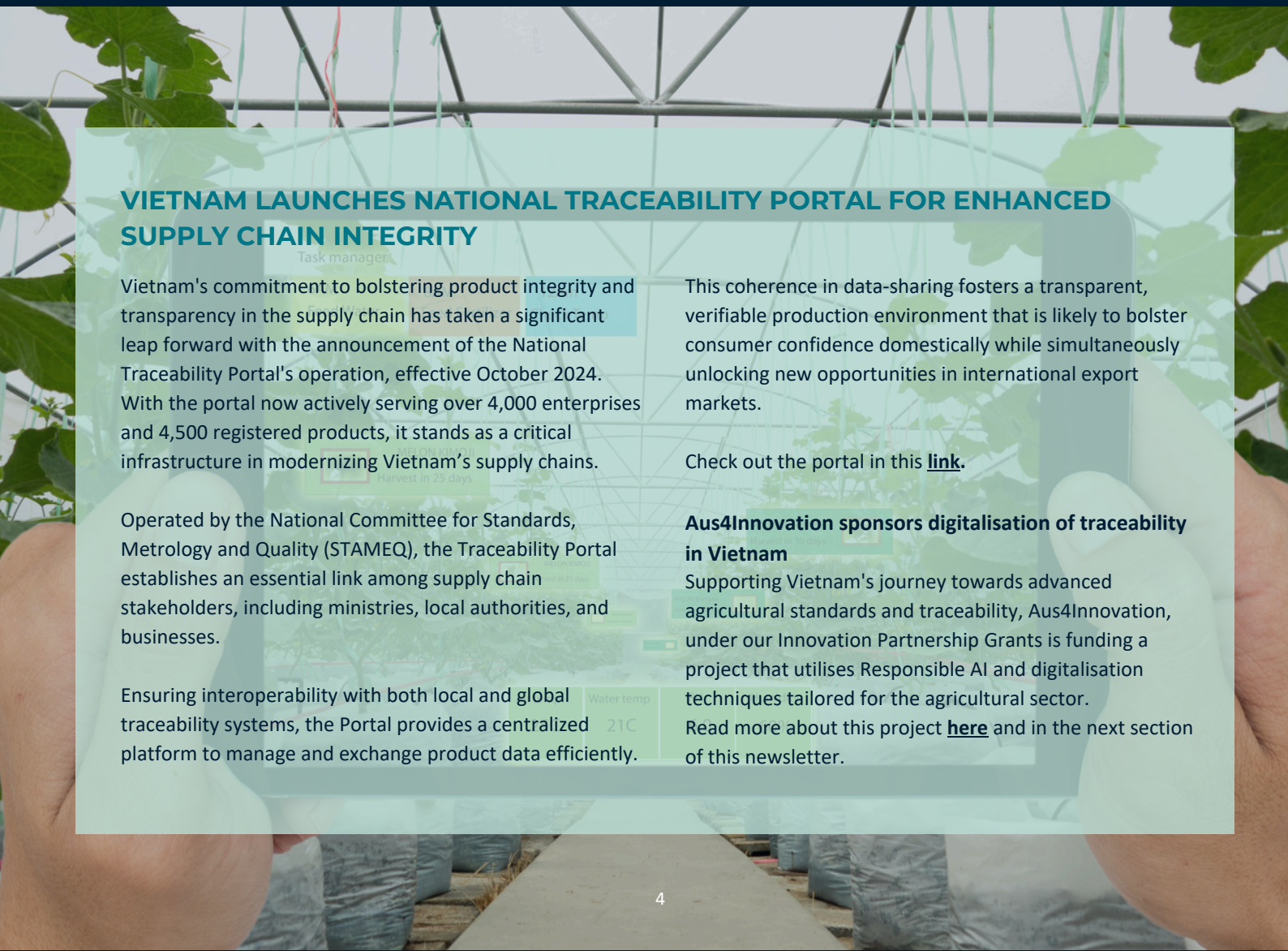
ETHICAL AI GUIDELINES IN VIETNAM WITH AUS4INNOVATION SUPPORT

The Ministry of Science and Technology (MOST) has introduced Vietnam's first ever responsible AI guidelines, underpinning the safe and responsible development of artificial intelligence (AI). Six fundamental viewpoints and nine principles in the guidelines emphasise the safeguarding of users' privacy, security, and overall welfare, ensuring that AI advancements benefit all stakeholders without compromising ethical values or economic and legal boundaries.

Critical to these guidelines is the protection against potential risks through preemptive safety measures, robust monitoring, and the establishment of secure trial environments for AI systems. The guidelines underscore the importance of transparency and accountability, requiring developers to control and explain their AI systems' inputs and outputs.

Furthermore, these guidelines are designed to evolve, adapting to new experiences and emerging needs in AI application. This dynamic approach is crucial given the rapid development of AI technologies.

In parallel to supporting MOST in developing these guidelines through a partnership with the University of Law (Vietnam National University), Aus4Innovation also helps explore how these guidelines would be applied in key sectors within Vietnam, such as healthcare, education, and agriculture. Through workshops, seminars, and collaborative projects, Aus4Innovation supports Vietnamese institutions and businesses to align with international standards, promoting a responsible AI landscape that benefits all stakeholders.



VIETNAM LAUNCHES NATIONAL TRACEABILITY PORTAL FOR ENHANCED SUPPLY CHAIN INTEGRITY

Vietnam's commitment to bolstering product integrity and transparency in the supply chain has taken a significant leap forward with the announcement of the National Traceability Portal's operation, effective October 2024. With the portal now actively serving over 4,000 enterprises and 4,500 registered products, it stands as a critical infrastructure in modernizing Vietnam's supply chains.

Operated by the National Committee for Standards, Metrology and Quality (STAMEQ), the Traceability Portal establishes an essential link among supply chain stakeholders, including ministries, local authorities, and businesses.

Ensuring interoperability with both local and global traceability systems, the Portal provides a centralized platform to manage and exchange product data efficiently.

This coherence in data-sharing fosters a transparent, verifiable production environment that is likely to bolster consumer confidence domestically while simultaneously unlocking new opportunities in international export markets.

Check out the portal in this **link.**

Aus4Innovation sponsors digitalisation of traceability in Vietnam

Supporting Vietnam's journey towards advanced agricultural standards and traceability, Aus4Innovation, under our Innovation Partnership Grants is funding a project that utilises Responsible AI and digitalisation techniques tailored for the agricultural sector.
Read more about this project **here** and in the next section of this newsletter.

Initiatives

FOSTERED INNOVATION: ELEVATING VIETNAM'S AGRICULTURE THROUGH TECHNOLOGY

The fourth round of the Aus4Innovation Innovation Partnership Grants has notably awarded AUD $1.45 million across three pioneering ventures, poised to transform Vietnam's agricultural processes through cutting-edge technology and sustainable methodologies:

- A collaboration between the University of Southern Queensland and the Vietnam National Space Center endeavors to utilise geospatial technologies to offer critical crop insights to smallholder farmers and policymakers
- Griffith University and Hanoi University of Science & Technology employ AI and digital twins for advanced carbon farming in Thanh Hoa province, aiming for sustainable agricultural growth and to unlock income opportunities by reducing greenhouse gas emission

  See more about this project **here.**

- An initiative fostering AI-driven certification and traceability, orchestrated by Griffith University and Vietnam’s Commission of Standard, Metrology, and Quality (STAMEQ), is set to revolutionise farm monitoring and enhance agricultural standards

This grant funding round focused on high-tech solutions to boost agricultural efficiency, market expansion, climate resilience, gender and disability responsiveness and social inclusivity, providing smallholder farmers with tangible benefits. Projects from this round now have a 24-month horizon to deliver impactful outcomes for Vietnam’s agricultural sector.

SUPPORTING VIETNAM'S POLICY IMPACTS FOR SUSTAINABLE GROWTH

Funded by the Aus4Innovation program, the Vietnam Innovation Policy Evaluation Framework Project is a formidable initiative aimed at enhancing Vietnam's ability to develop and assess innovation-driven policies. Co-designed and implemented with the Ministry of Science and Technology (MOST) in 18 months, the project integrates Good Regulatory Practice (GRP) and innovation system theories to foster national growth, sustainability, and inclusiveness.

Key features include the creation of the Innovation Regulation Assessment Tool, which helps assess policy impacts on innovation while considering Gender Equality, Disability, and Social Inclusion (GEDSI) factors. This effort commenced with impactful stakeholder workshops and analysis focused on the shrimp industry, identifying regulatory gaps hindering sustainable innovation.

A significant project achievement was the development of a Regulatory Proposal Checklist to guide policy formulation and interactive policymaker training modules. Through these activities and initiatives, the project supports Vietnam in regulation-driven innovation, addressing not just economic but also social and environmental advancements.

STRENGTHENING VIETNAM'S PIG FARMING THROUGH INNOVATION ALLIANCE

The National Innovation Alliance for Pig Biosecurity was launched mid last year, constituting a meaningful collaboration between Aus4Innovation and the National Institute of Animal Sciences. This initiative is deigned to help Vietnam’s pig farming industry by prioritising innovation in biosecurity practices to counteract disease threats like African Swine Fever (ASF), which has devastated the industry since 2019. Smallholder farmers, who make up more than 80% of the industry and are critically affected due to poor biosecurity measures, are at the heart of this mission.

The alliance is supported with insights from a comprehensive study, jointly delivered by CSIRO, Charles Sturt University, and the National Institute of Animal Science. The study provided assessments on biosecurity vulnerabilities of 160 smallholder pig farms across Ha Nam, Hoa Binh, and Bac Giang provinces, highlighting possible areas for innovation and policy improvements. It also underscores a unified effort to enhance biosecurity defenses, secure smallholder livelihoods and strengthen industry resilience.

Find an infographic about the study **here**.

Impact

HORTICULTURE INNOVATION CLUB TAKES ROOT IN THE CENTRAL HIGHLANDS

Under Aus4Innovation, in strategic partnership with the Vietnam Academy of Agriculture Sciences, the Horticulture Innovation Club (HIC) emerged as a vibrant coalition of scientists, SMEs, policymakers, cooperatives, farmers, and horticulture experts. Its foundation is the embodiment of a shared ambition: to intertwine research, agri-business, and policy-making in a bid to fortify the horticulture industry's resilience. The HIC has rapidly flourished, now boasting 800 members in the North and 500 in the South of Vietnam, alongside a prolific website rich in articles, photos, and vital information on advancements in varieties, technologies, and expertise in agriculture.

The club champions an array of activities including weekly talk shows and technical seminars that draw an average of 50 participants per session, along with field trips, and initiatives aimed at integrating research, production, and consumption within horticulture value chains. It has proudly recorded over fifty online seminars, covering agronomy, agri-production, agricultural economics, among others, as focal areas for discussion.

Moreover, the HIC has made notable strides in sharing success stories and lessons learned through the inspiring journeys of cooperatives and farms with eight field trips across Vietnam. In 2024, and the club has expanded to the Central Highlands, strengthening its focus on the fruits sector. This proactive community, through nurturing connections and exchanging invaluable expertise, continues to push the envelope in technological advancement and market trend awareness. It is a testament to a collective aspiration towards sustainable agricultural excellence.

ENHANCING VIETNAM'S HEALTHCARE SYSTEM

Through the support of the Aus4Innovation Program, potential breast cancer patients are receiving a more accurate diagnosis through the VIETRAD project. Although the initiative was completed in 2021, the University of Sydney and Vietnam's Health Strategy and Policy Institute (HSPI), continue to support the project. They employ machine learning to enhance the diagnostic capacity of Vietnamese radiologists, aligning their accuracy with international best practices through capacity-building efforts. The system is now being utilised by radiologists in major hospitals across Hanoi, Da Nang, Ho Chi Minh City, and other provinces. Continued collaboration between the two organizations supports further insights into policy development and improvements in diagnostic practices.

The VIETRAD project represents a vital step toward more sophisticated healthcare solutions, ultimately fostering a stronger, more resilient health system in Vietnam.

Innovations

TAKING PRINTED FLEXIBLE SOLAR TECH FROM LAB TO REAL WORLD

CSIRO has initiated a A$6.8 million venture in Victoria, Australia, launching an innovative facility to transition its printed flexible solar technology from the laboratory directly into practical use.

CSIRO’s innovative solar cells are made using an advanced material called perovskite, which is printed on long continuous rolls of flexible film. This advanced tech is light, adaptable, and printed on thin plastic, paving the way for diverse applications in sectors such as construction, space, defence, mining, and disaster management.

The facility is expected to bolster a robust Australian solar manufacturing industry while supporting global energy solutions and the shift to net-zero emissions.

BREAKTHROUGH IN PLANT-BASED FUELS BY AUSTRALIAN SCIENTISTS

Australian scientists from CSIRO have achieved a significant breakthrough by developing a technology that boosts oil yield from plants, offering a new, sustainable source for biofuels without compromising food security.

This innovative approach, called the Biomass Oil Project, enables the extraction of oil not just from seeds and fruits but also from the biomass of plants, including stems and leaves. The technology aims to create an essential new global energy source, promising advancements in the production of sustainable aviation fuel and other biofuels, ensuring a greener future while maintaining food supplies.

CSIRO'S FACILITY ACCELERATES HYDROGEN TECH TO MARKET

CSIRO's Hydrogen Technology Demonstration Facility (HTDF) in Victoria, Australia is a hub for advancing hydrogen technologies towards commercial readiness.

One example is Hadean Energy, utilising the facility with CSIRO's Kick-Start grant program to trial their innovative Solid Oxide Electrolysis cell, which produces green hydrogen more efficiently, requiring up to 30% less electricity. The simple, durable design promises lower costs and is currently exceeding trial expectations.

The HTDF, plays a crucial role in driving tech from benchtop to market, underscoring CSIRO’s commitment to fostering commercialisation and contributing to decarbonisation efforts.

Interview

ENHANCING VIETNAM'S FOOD PROCESSING SECTOR: INSIGHTS FROM CSIRO'S DR. PABLO JULIANO OTERO

Dr. Pablo Juliano Otero, the esteemed Food Processing and Supply Chain Group Leader at CSIRO, embarked on a fruitful visit to Vietnam's Central Highlands, a region renowned for its production of avocados, durians, and passion fruits. Aimed at sharing CSIRO's expertise in agro-processing and preservation, Dr. Juliano's journey not only spotlighted these key fruits but also fostered dialogue with local companies and SMEs, exploring potential collaborations within the food sector.

In an enlightening interview with Tia Sang magazine, Dr. Juliano shed light on his observations from the trip. He pointed out the fragmented and often rudimentary storage and processing technologies among smallholders, alongside their financial constraints hindering technological advancements. Despite these challenges, a silver lining was observed in some small-scale businesses demonstrating innovation and growth through visionary leadership and a readiness to learn.

Dr. Juliano offered advice for small enterprises aiming to innovate and grow. Emphasising the importance of learning from existing successful models, he urged businesses to firstly look at market demands, which in turn can dictate suitable technological solutions. Furthermore, he advocated for partnerships, encouraging collaboration with researchers and industry stakeholders to leverage shared resources, strengths, and to mitigate risks collectively. This holistic approach towards understanding and solving challenges could pave the way for transformative advancements in Vietnam's food industry, reflecting a promising future for the region's sustainable agriculture and cohesive supply chains.

Dr Pablo Juliano Otero
CSIRO, Group Leader, Food Processing and Supply Chains

Pablo Juliano is a supply chain transformation leader with strong background in innovation in food processing and food waste upcycling.

Over 20 years of service to the food industry in 7 countries, he currently leads the Food Processing and Supply Chains Group, which delivers science innovation to the food industry as part of CSIRO's Food Program. His research focuses on reducing and value capturing on food losses and waste across the supply chain by upcycling into co-products using CSIRO platform technologies.

Invitations

NEXT ROUND OF INNOVATION PARTNERSHIP GRANT ON THE HORIZON

Stay tuned for Round 5 of the Innovation Partnership Grant, opening in Q2 2025! Keep an eye on the Aus4Innovation website and the Facebook fanpage of the Australian Embassy in Hanoi for updates. Seize this opportunity to be the next grant recipient and transform your innovative solutions into tangible realities in Vietnam.

JOIN THE PLASTIC REVOLUTION: IPPIN INCUBATOR 2025

Get ready to redefine plastic waste with IPPIN's Incubator Program! Returning in February 2025, this is your chance to turn innovative ideas into market-ready solutions. Stay updated at IPPIN.org and transform the plastic lifecycle alongside a global network of changemakers.

Aus4Innovation is the ten-year (2018-2028) A$33.5 million flagship program aimed at strengthening Vietnam's innovation system to support inclusive and sustainable socio-economic development. The program is funded by Australia's Department of Foreign Affairs and Trade (DFAT), co-funded and managed by CSIRO – Australia's national science agency and delivered in a strategic partnership with Vietnam's Ministry of Science and Technology.

Contact us:
Website: https://research.csiro.au/aus4innovation/
Email: aus4innovation@csiro.au
Tel: +84 4 3774 0128

Australian Embassy, 8 Dao Tan Street, Ba Dinh District, Hanoi, Vietnam.

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