IIAL International Conference on Applied Sciences of Innovation and Sustainability 2026: Resource-Constrained Innovation and the Reconciliation of Efficacy with Austerity Measures

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Editor's Abstract

Resource-constrained innovation has moved from a peripheral concern to a defining condition of contemporary innovation systems, as organisations in both emerging and advanced economies confront tightening budgets, infrastructure gaps, disrupted supply chains, and heightened expectations of social and environmental performance (de Waal, 2017). In this conference theme, the question is not whether austerity limits efficacy, but how efficacy is actively produced as a response when austerity becomes a durable operating reality. Drawing primarily on de Waal's framing of resource-constrained innovation as a distinct mode of innovation that requires purposeful organisational and cross-functional adaptation, this call invites scholarship that treats constraint not as an isolated cost problem but as a systemic design challenge (de Waal, 2017). Under resource constraint, successful innovation frequently depends on redesigning product architectures and service models while simultaneously reconfiguring governance, partnerships, distribution channels, and after-sales support, particularly where institutions and infrastructure are partial, fragmented, or unevenly accessible (de Waal, 2017).

At the same time, resource constraint can operate as a generative discipline that alters the mechanisms through which novelty, quality, and adoption are achieved. Complementary work on entrepreneurial bricolage suggests that constraints may stimulate innovation for positive change through the recombination of available resources, with the specific pathway varying by the type of constraint, including knowledge and environmental protection vs utilization, social growth versus erosion, and economic austerity vs. investment (Chen and Shen, 2023). Related resource-capabilities perspectives further indicate that innovation under constraint can depend on substitution, recombination, and dynamic capability building, with managerial capacity and culturally embedded practices shaping whether constraints become enabling rather than disabling conditions (Johnson and Bicen, 2013). The conference therefore seeks contributions that theorise and empirically examine the

paradoxical work of reconciling performance demands with austerity logics across sectors, geographies, and levels of analysis (de Waal, 2017; Johnson and Bicen, 2013). Submissions are encouraged in particular from non-developed economies where resource-constrained innovation has been observed as organic that advance conceptual frameworks, rigorous empirical studies, and practice-grounded accounts of how organisations design, govern, and scale innovations that are cost-disciplined, context-responsive, and demonstrably effective under constraint (Chen and Shen, 2023; de Waal, 2017).

Keywords: Austerity; Efficacy; Frugality; Sustainability; Adaptation.

Conference Tracks

The following tracks consider de Waal (2017) cross-functional required adaptations at the centre, while intersecting explicitly with sustainability and the austerity-efficacy tension, and while still leaving room for supporting perspectives on bricolage and resource-capability substitution (Chen and Shen, 2023; Johnson and Bicen, 2013).

Track 1 - Frugal and resource-constrained innovation for sustainability transitions

This track invites work that theorises and tests how frugal, good-enough, and cost innovations contribute to sustainability outcomes across environmental, social, ethical, legal and economic dimensions, including when performance expectations increase while resources contract (de Waal, 2017). Submissions may examine design principles, adoption dynamics, and trade-offs in doing more with less without romanticising constraint as inherently positive (Chen and Shen, 2023; Johnson and Bicen, 2013).

Track 2 - Organisational redesign and cross-functional adaptation under austerity

This track focuses on the internal and inter-organisational changes required for resource-constrained innovation, including governance, portfolio management, procurement, accounting logics, supply chain configuration, service delivery, and after-sales support (de Waal, 2017). Contributions might analyse how organisations build the managerial and cultural capabilities to convert constraint into disciplined efficacy, and when such conversion fails (Johnson and Bicen, 2013).

Track 3 - Sustainable operations, resilient supply chains, and constrained logistics

This track centres on how infrastructural constraints, fragmented distribution systems, and service limitations shape sustainable innovation outcomes, including circular flows, reverse logistics, maintenance, repair, and end-of-life strategies (de Waal, 2017). Submissions are encouraged that link

supply chain integrity, traceability, and resource efficiency to the practical realities of constrained operating environments.

Track 4 - Inclusive and equitable innovation in resource-constrained contexts

This track examines how resource-constrained innovation intersects with inclusion, affordability, accessibility, and distributive justice, including base-of-the-pyramid and underserved communities, such as indigenous and physically challenged, in both emerging and advanced economies (de Waal, 2017). Possible topics include co-design, community-based intermediaries, gendered and youth-led innovation, and the ethics of “good-enough” design under inequality (Johnson and Bicen, 2013).

Track 5 - Bricolage, improvisation, and circular resource strategies

This track invites micro- and meso-level studies of how individuals, teams, and ventures innovate through recombination, repair, reuse, and creative repurposing, and how these practices connect to circular economy aims (Chen and Shen, 2023). Submissions may compare the innovation effects of different constraint types, including knowledge versus financial constraints, and explore when bricolage becomes scalable capability rather than a short-term workaround (Chen and Shen, 2023; Johnson and Bicen, 2013).

Track 6 - Digital and data-enabled sustainability under constraint

This track focuses on digital platforms, artificial intelligence, Internet of Things, blockchain, and data governance approaches that enable sustainability performance in low-resource settings, including low-connectivity environments, such as rural and remote communities, and limited institutional capacity (de Waal, 2017). Submissions might explore lightweight architectures, minimum viable data approaches, and the organisational adaptations needed to embed these tools across functions and partners (de Waal, 2017).

Track 7 - Policy, standards, and regulation for efficacy through austerity.

This track invites analyses of how public policy, standards regimes, and regulatory constraints shape innovation choices and sustainability impacts, including the enabling and disabling effects of compliance costs and reporting requirements (de Waal, 2017). Submissions may examine how organisations substitute resources and build capabilities to meet standards under constraint, and how policy design can avoid pushing costs onto the most resource-limited actors (Johnson and Bicen, 2013).

Track 8 - Evaluation, measurement, and impact evidence for resource-constrained sustainability innovation

This track seeks methodological and empirical work on measuring outcomes and avoiding austerity theatre, including rigorous evaluation designs, performance metrics, life-cycle thinking, and evidence of real-world adoption (de Waal, 2017). Submissions might address how organisations validate assumptions under constraint and what counts as credible efficacy when resources for monitoring and evaluation are limited (Chen and Shen, 2023).

References

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