

## Facilitating Knowledge Transfer for New Product Development in Portfolio Entrepreneurship: A Case Study of a Sodium-Ion Battery Start-up in China

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**Abstract :** Start-ups are consistently under pressure to overcome liabilities of newness and smallness. They must focus on assembling resource and engaging constant renewal and repeated entrepreneurial activities to survive and grow. As an important form of resource, knowledge is constantly vital to start-ups, which will help start-ups with developing new product in hence forming competitive advantage. However, significant knowledge is usually needed to be identified and exploited from external entities, which makes it difficult to achieve knowledge transfer; with limited resources, it can be quite challenging for start-ups balancing the exploration and exploitation of knowledge. The research on knowledge transfer has become a relatively well-developed domain by indicating that knowledge transfer can be achieved through plenty of patterns, yet it is still under-explored that what processes and organizational practices help start-ups facilitating knowledge transfer for new product in the context portfolio entrepreneurship. Resource orchestration theory emphasizes the initiative and active management of company or the manager to explain the fulfillment of resource utility, which will help understand the process of managing knowledge as a certain kind of resource in start-ups. Drawing on the resource orchestration theory, this research aims to explore how knowledge transfer can be facilitated through resource orchestration. A qualitative single-case study of a sodium-ion battery new venture was conducted. The case company is sampled deliberately from representative industrial agglomeration areas in Liaoning Province, China. It is found that distinctive resource orchestration sub-processes are leveraged to facilitate knowledge transfer: (i) resource structuring makes knowledge available across the portfolio; (ii) resource bundling makes combines internal and external knowledge to form new knowledge; and (iii) resource harmonizing balances specific knowledge configurations across the portfolio. Meanwhile, by purposefully reallocating knowledge configurations to new product development in a certain new venture (exploration) and gradually adjusting knowledge configurations to being applied to existing products across the portfolio (exploitation), resource orchestration processes as a whole make exploration and exploitation of knowledge balanced. This study contributes to the knowledge management literature through proposing a resource orchestration view and depicting how knowledge transfer can be facilitated through different resource orchestration processes and mechanisms. In addition, by revealing the balancing process of exploration and exploitation of knowledge, and laying stress on the significance of the idea of making exploration and exploitation of knowledge balanced in the context of portfolio entrepreneurship, this study also adds specific efforts to entrepreneurship and strategy management literature.

**Keywords :** exploration and exploitation, knowledge transfer, new product development, portfolio entrepreneur, resource orchestration

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