



## "Coupled processes" as dynamic capabilities in systems integration [

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Analítica

The dynamics of innovation in complex systems industries is becoming an independent research stream. Apart from conventional uncertainties related to commerce and technology, complex-system industries must cope with systemic uncertainty. This paper's objective is to analyze evolving technological paths from one product generation to the next through two case studies in the Brazilian aerospace industry, considering systems integration as an empirical instantiation of dynamic capabilities. A proposed "coupled processes" model intertwines two organizational processes regarded as two levels of dynamic capabilities: new product and technological developments. The model addresses the role of emergent properties in shaping a firm's technological base. Moreover, it uses a technology readiness level to unveil systems integration business tricks and as a decision-making yardstick. The "coupled processes" model is revealed as a set of dynamic capabilities presenting ambidexterity in complex systems industries, a finding that may be relevant for newly industrialized economies

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