

Contractualising functionality: valuing performance through cooperative relationships' enhancement efforts

With a view to putting the concept of ecological transition into practice, models based on a functional economy have been developed over the past few decades, since Stahel and Giarini published their work in 1990 (Giarini & Stahel 1990), up to the Product-Service Systems approach (Mont 2004). This work involves dematerialisation – i.e. seeking to optimise use value above all, rather than constantly renewing the physical dimension of the capital. The terminology associated to *functional economy* evolved (van Niel, 2007), from a “service economy” approach (Giarini and Stahel, 1990), through “utilization-focused service economy” (Stahel, 1994) and “functional economy” (Stahel, 1997), and to “functional service economy” (Stahel, 2006). This paper aims to highlight theoretical frontiers between those approaches. We will clarify their practical consequences (i.e. conditions and pathways of transfer from shared economical visions to techno-financial processes, and *vice-versa*) through analysing substantial differences between these approaches (that in our view reflect an internal evolution of the *functional economy* concept) and the current service provision arrangements approach. In our opinion, this latter is not part of *functional economy* as it does not intrinsically lead to dematerialisation.

Firstly, the paper considers the shift that occurs from technico-economical rationales, to additional cooperative socio-economical rationales that necessarily emerge in a functional economy approach. It occurs along four dimensions (Morlat, Mougenot and Pinto-Silva 2014): (1) from focus on the technical object at the local level to the analysis of a socio-technical system integrated into the region; (2) from valorisation of material production to valorisation of a service rendered; (3) from a sectoral and actuarial approach to cost and benefit to a cross-cutting, multi-criteria approach giving space also to the notion of historic cost; (4) from bilateral transactions and financial accounting methods, to collective contractualisation and analytic accounting methods suitable for incorporating the economic effects of the recognition of social and environmental values. This shift leads to a *de facto* transposition of the concept of organisation from the level of the economic unit considered by current economic models to a more inclusive level, in order to adapt the relationships between actors, along with the legal rules that apply to those relationships, to a more contributive economic rationale.

Secondly, this transposition makes it possible to develop the notion of a *service ecosystem* (Lauriol, 2007). What differentiates a service ecosystem from a services market, in our view, is first and foremost its finality.

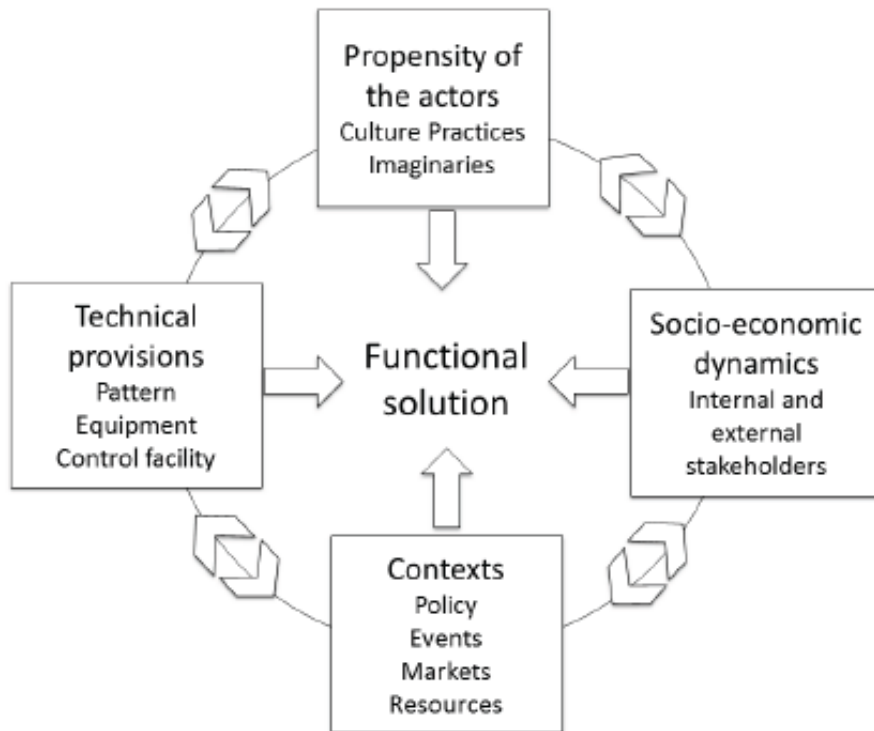


Figure 1: Functional solution in service eco-system approach

The service ecosystem is oriented toward ecological transition by articulation of support functions (communication, negotiation, administration, valuation, financial and extra-financial accounting, technical systems management, etc.) that are to ensure resilience of the ecosystem and dematerialisation of its value production. The influence of these support functions locally combines to that of regulations and the market. Formalising a service ecosystem is therefore an approach of institutionalising a process of dematerialisation: the finality and the means implemented displace the concept of organisation from the level of the industrial unit or its economic partners, to a more inclusive level, which is that of the service ecosystem. Promoting the functional economy model involves re-qualifying the functions of production, distribution and consumption. The theory developed here is that the new business models founded on a functional economy must have an *ex ante* performance contracting approach to the resilience of production capacities and the allocation of economic advantages. In a functional economy, *cooperative transactions* (Zacklad, 2007) appear when socio-economic processes generate, through consultation, a consensus on the productive nature of resources, the shared recognition of advantages and the prices of use. Consumption is then no longer simply a link in an economic value chain, but takes on the role of a direct production factor within a space (rather than a chain) of social, economic and environmental values.

Thirdly, the two previous sections allow to underline the fact that functional economy involves renewing the notion of exchange. The relationships among actors within the service ecosystem and the rules of the law that apply to those relationships are then adapted to a

more contributive rationality than that outside of the ecosystem. This means that the institutionalisation of functional economy models would not only take place through the transformation of production processes, or simply through a transformation in approaches to distribute products. Considering the consumption function as integrated into production management and distribution, contractual modes and accounting grids must adapt. Pricing the performance of a service ecosystem implies evaluation of the socio-economic and environmental effects, followed by the production of strategic information by integrating performance data into multi-criteria economic information that is connected to, but not aggregated with, monetary artefacts. We finish the section on the question of the determinants of contractual and reporting innovations, which is directly linked to an analysis of relationships between economy and accounting. This analysis certainly not only refers to a capitalistic approach, but also brings about valuation (not pricing) of relationships between the organisation and its local environment (territory). It also brings into question the reference to time, both in the discounting and amortisation practices, and in relation to the development of representations that is needed to institutionalise innovation (Norgaard, 1994). From there, we conclude on the importance of an institutional accompaniment of performance contracting practices and accounting practices co-evolution.

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