

Environmental impact and financial cost of digital services can be assessed using eco-design, service representation, and operations management approaches.

“New Approaches to Assess and Reduce Environmental Impact and Financial Cost of Orange Digital Services”

Introduction

Orange (formerly France Télécom) has been working for many years now to positively improve the environmental impact of its products and infrastructures. In #Essential2020, the company has announced an ambitious goal of reducing its CO₂ emission, aiming for a footprint 50% lower per customer use from 2006 to 2020. Reducing the carbon footprint of its networks and equipment, and actively integrating the principles of circular economy within the organization and its processes have since then guided Orange activities in terms of reducing their environmental footprint. Now, Orange aims to investigate on reducing the impact of its services. It is therefore important to have effective methodologies in evaluating and improving both financial cost and environmental impact of end-to-end digital services.

Research Questions

1. How can digital services be graphically represented using service design tools and operations managements techniques to evaluate both environmental impact and financial cost?
2. How can environmental impact be effectively assessed for digital services?
3. How can total cost be effectively assessed for digital services?
4. How can design-for-environment-and-cost and service eco-design be integrated to the design process of Orange digital services?

Approaches

Initial investigations looked into the following service representation and operations management approaches: (a) Service Blueprinting, (b) Process Chain Network, (c) Business Process Model & Notation, and (d) Customer Journey Mapping. Each was described for ontological analysis to look into the possibility of integrating both aspects of environmental and financial cost as valid design considerations.

Approach	Financial Cost	Environmental Impact
Service Blueprinting	✓	✓
Process Chain Network	✓	✗
Business Process Model & Notation	✗	✓
Customer Journey Mapping	✗	✗

References:

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- [4] A. Følstad and K. Kvale, "Customer journeys: a systematic literature review," *Journal of Service Theory and Practice*, vol. 28, no. 2, pp. 196–227, Mar. 2018.
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If you can not measure it, you can not improve it. (Lord Kelvin)



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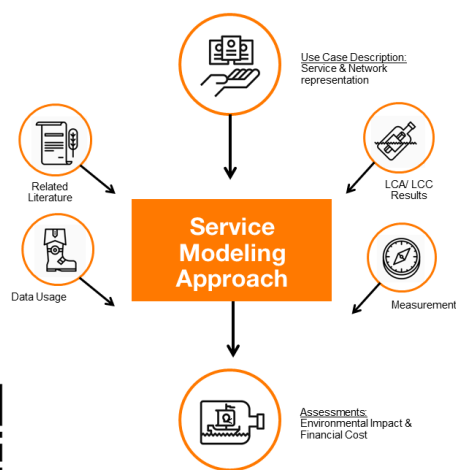


Figure 1. Proposed Service Modelling Approach

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