

## **Open Configuration: Framework and Definition**

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### **Abstract**

Traditional product configuration is based on the assumption that all configuration elements and their relationships are predefined. Therefore, most configuration tools (e.g., configurators, configuration methods) have limitations in dealing with unforeseen customer requirements. In view of these limitations, open configuration is proposed as an innovative concept to assist companies in configuring products that can meet unforeseen yet reasonable customer requirements. This study defines open configuration in detail. Open configuration elements can be organized into four networks: User Requirement Network, Predefined Configuration Network, Dynamic Configuration Network, and Additional Constraint Network. Collaboratively, the four networks model the predefined configuration knowledge, newly generated dynamic configuration knowledge, and interactions in between. In accordance with the interactions, this study further defines two reasoning mechanisms: Fuzzy Component Module and Additional Constraint Module, which are fundamental to open configuration.

### **Keywords**

Product configuration, open configuration, Dynamic Configuration Network, Additional Constraint Network

### **Biography**

**Xiaoyu CHEN** is a PhD candidate of Ecole Centrale Paris and a research assistant in IESEG School of Management. Ms. Chen holds a Bachelor of Engineer degree in Automation and a Master of Science in Information System from Northwestern Polytechnical University (China).

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