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TOWARDS A HOLISTIC FRAMEWORK FOR COSMETIC FORMULATION 4.0

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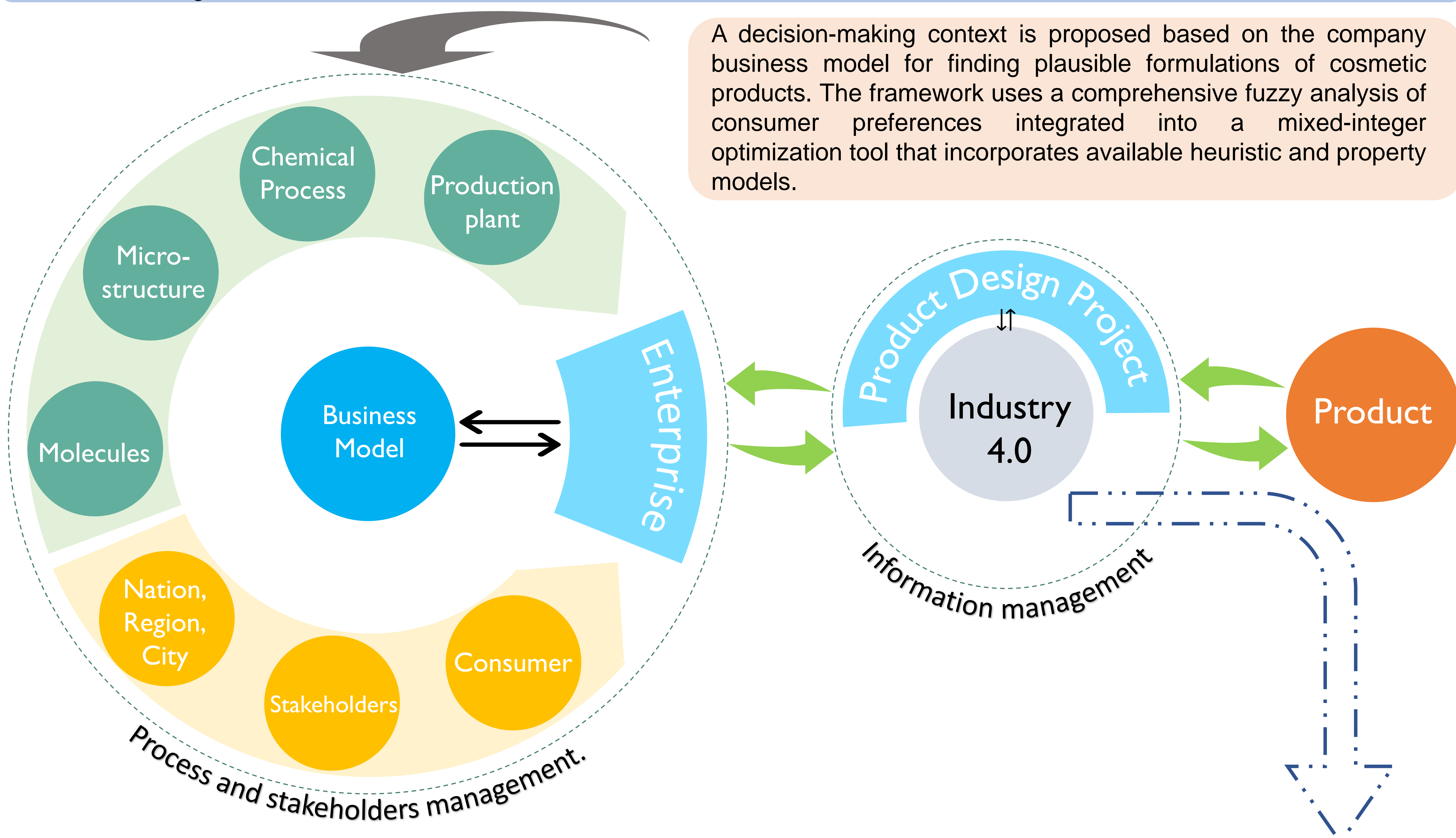


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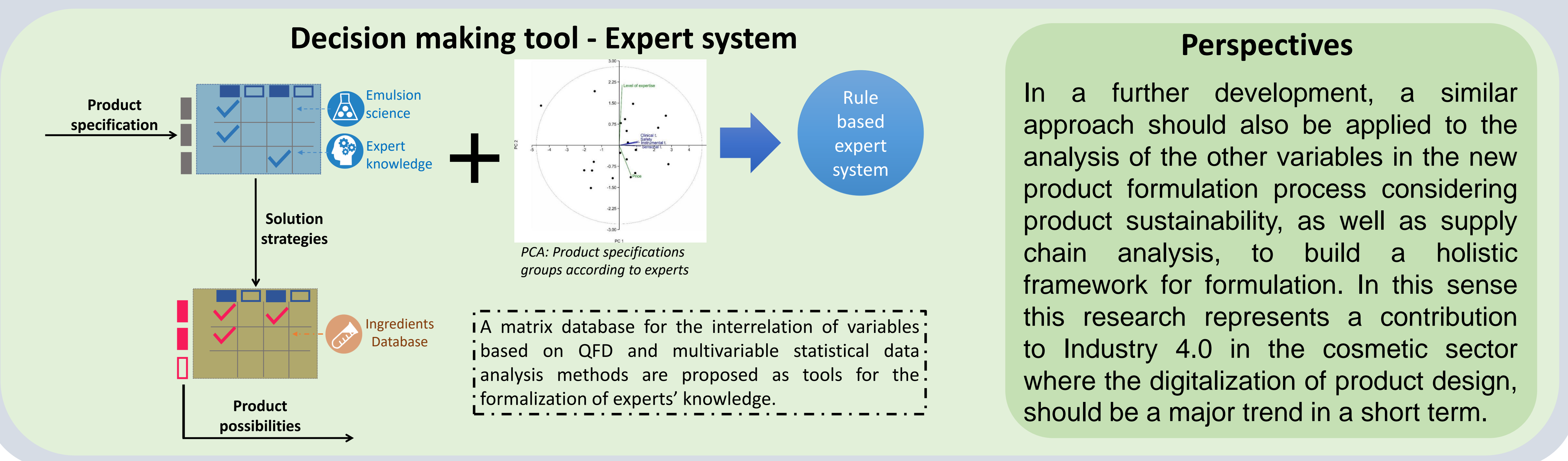
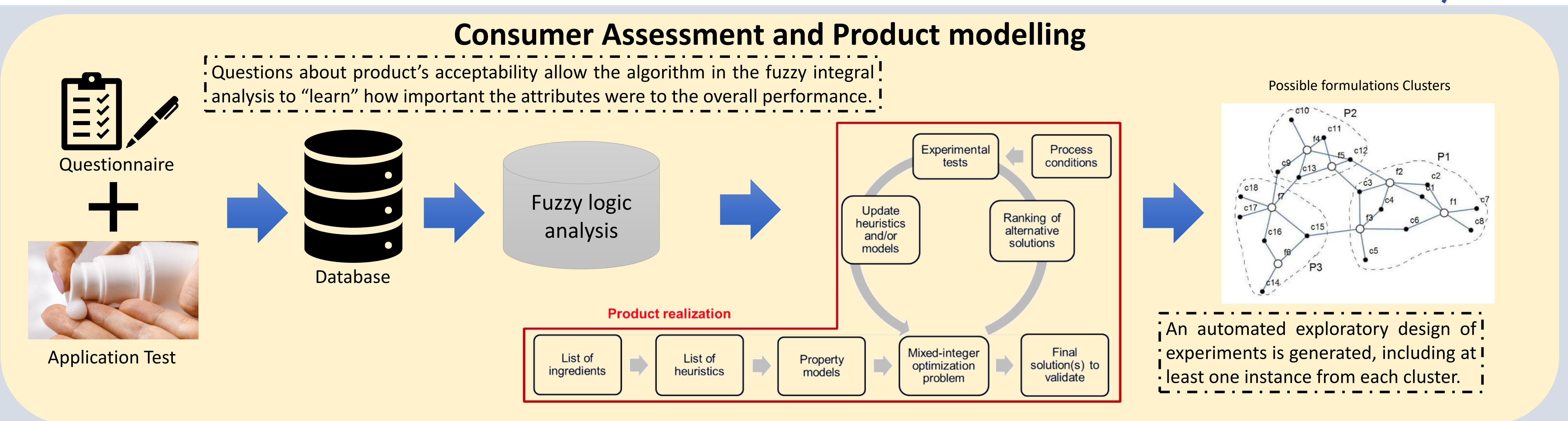
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Formulated consumer products design is a major challenge in many industrial sectors. Desired product properties depend on its application and usually are conferred by a synergistic action of ingredients, composition, and production process. Product design projects must manage aspects such as the study of consumer needs and their translation, technical requirements, product conceptualization, selection of suppliers and raw materials, environmental objectives; marketing characteristics; quantitative sales and distribution goals.



A decision-making context is proposed based on the company business model for finding plausible formulations of cosmetic products. The framework uses a comprehensive fuzzy analysis of consumer preferences integrated into a mixed-integer optimization tool that incorporates available heuristic and property models.



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