

Creating value for people, organisations and society at large in smart city ecosystems

The Value Framework

The Value Flow Model

Building sustainable innovation ecosystems



... MEANINGFUL **INNOVATIONS**

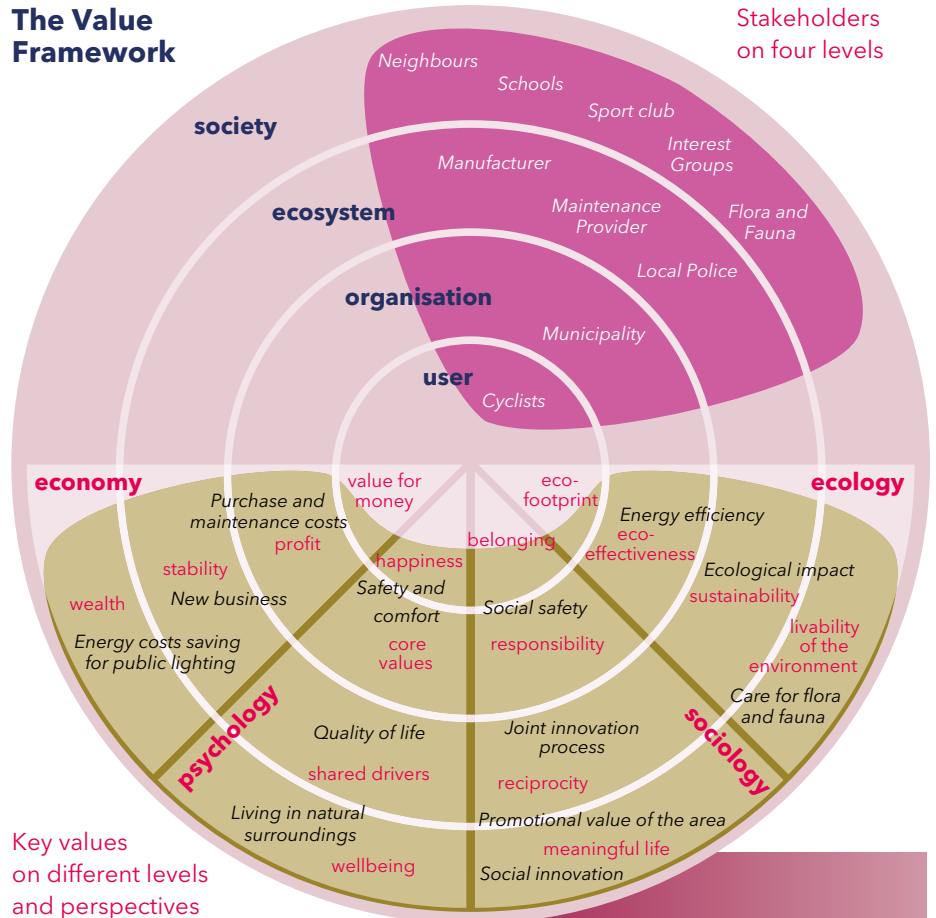
Increasing quality of life

The world is currently facing a number of tremendous societal challenges for which traditional approaches to innovation no longer work. We're squandering our planet's resources and violating nature. In the pursuit of wealth, people at all levels take decisions that seem to mainly address their own interests. So pessimists warn us: we're racing full speed ahead on a dead-end track.

However, optimists view the abundance of opportunities that these multiple crises bring as a way to really make a difference; not just for philanthropic actions, but for sound business.

Innovations for smart lighting and smart cities aim at just that: solutions to increase quality of life.

The Value Framework



LightHouse uses the Value Framework to address shared value creation and to show how societal challenges provide opportunities for meaningful innovations.

The models presented here are based on the methods described in 'Innovation Design: Creating Value for People, Organisations and Society', by Elke den Ouden. The book is published by Springer Science+Business Media B.V. in 2012.

A brief description of the tools is also available in 'Advanced design methods for successful innovation' Bont, C. de, Ouden, P.H. den, Schifferstein, R., Smulders, F.E.H.M. & Voort, M. van der (Eds.). Published in 2013 by Design United, Den Haag.

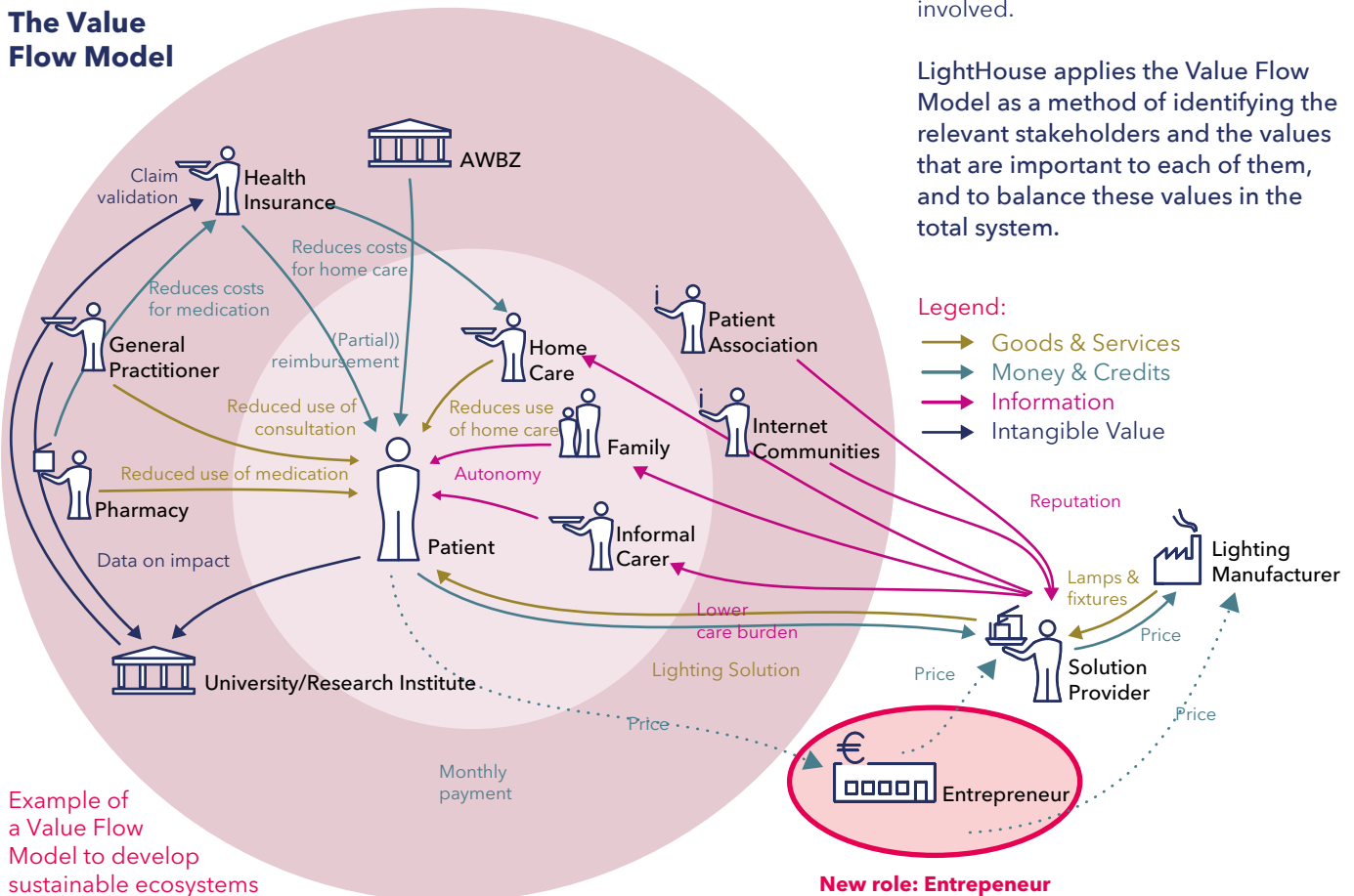
Collaboration between different organisations

Enhancing quality of life in cities requires collaboration between different organisations to combine different expertise areas and experiences into a new value proposition. Moreover, the resulting value propositions are often a combination of products and services from different organisations, rather than a single product or service.

Hence, apart from the products and services themselves, a total ecosystem needs to be designed.

This should include all the relevant social and economic actors required for a successful launch of the product or service on the market, as well as provide for sustained service in the long term. The design of the ecosystem needs to ensure a return on investment of both tangible and intangible value for all the business parties and other stakeholders involved.

The Value Flow Model



Combining different perspectives

The Value Framework is a method that supports the creation of shared value for people, organisations and society at large. When designing solutions for societal challenges it is important to understand the issues at a user level, organisational level, as well as understanding the context at societal level in an extended network of stakeholders.

No organisation has all the relevant knowledge and experience available itself, so collaboration is needed between different organisations: public and private, nonprofit and for-profit, large and small etc.

The Value Framework combines different perspectives on value from economy, psychology, sociology and ecology, and visualises opportunities for value creation.

A stepwise approach to create shared value

The method can be used in brainstorming sessions with stakeholders to define new value propositions, as well as to analyse the value of initial value propositions and enrich them. As shown below, the method can be applied in a stepwise approach to create shared value with stakeholders.

Steps in creating shared value

Initial value proposition



Selection of stakeholders



Enriched value proposition



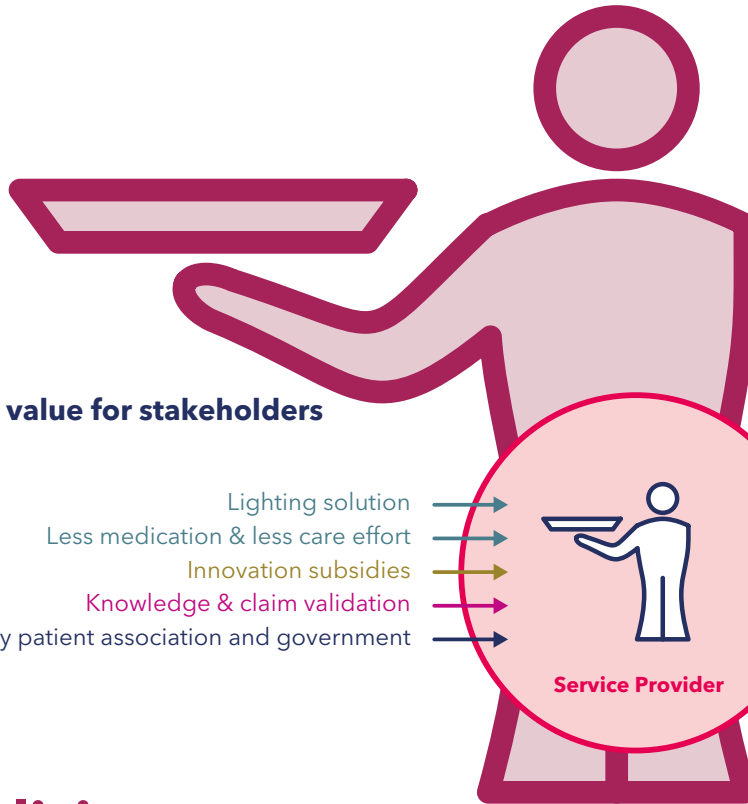
Diagnose value gaps

Identify stakeholders

Enriched value proposition

New opportunity

... SHARED VALUE



Balancing value for stakeholders



Visualising specific interactions

The Value Flow Model visualises specific interactions in the network to provide a perspective for understanding value-creating roles and relationships, and offers a dynamic view of how both financial and non-financial assets are converted into value. The main elements of the model are the actors who play the different roles in the ecosystem and the value flows in the ecosystem.

The goal of the ecosystem is not only to realise the new value proposition, but also to ensure a vital economic system to support the further development and continuous innovation. It is important to ensure a sustainable business on two levels: the total system should be in balance, and each party should have a fair balance in incoming and outgoing value.

With various interviews and workshops LightHouse facilitates the process as an independent mediator and helps to create understanding for the different perspectives, roles and requirements in the ecosystem.

Enriching value propositions and gaining commitment

The method has proved valuable in enriching value propositions, as well as in gaining commitment from the different business actors to make the investments required for implementation.

LightHouse is founded to disclose the knowledge on smart lighting and smart cities of the Eindhoven University of Technology for society. LightHouse has close ties to the research programs related to smart urban lighting and smart cities.

LightHouse cooperates intensively with the TU/e strategic areas Mobility and Energy and the research programs in the Intelligent Lighting Institute (ILI), the Data Science Centre Eindhoven (DSCe) and the Smart City Centre Eindhoven (SCCe). LightHouse executes knowledge intensive projects starting from needs or questions from society and organisations as part of the valorisation activities of TU/e Innovation Lab, where it also holds office.

We apply the knowledge, methods and designs from the different departments of the university in practical applications and viable, sustainable lighting and smart city solutions. We co-create solutions with cities as well as multinationals, smaller companies and start-ups. We add value to the TU/e by bringing in best practices and societal needs to inspire new research and education programs.

Projects

- **Zilverackers:** assessing stakeholder value for innovative lighting on a bicycle path in an ecological zone.
- **Stratumseind:** creating a sustainable ecosystem for smart lighting solutions in an entertainment district.
- **S-mart Strijp-S:** defining sustainable business models for an open smart lighting platform and services.
- **Roadmap and Ecosystem for the Smart Cities Research program at TU/e**
- **Enriching the vision of Stationplein-zuid for Amvest**

For more information, please visit:

www.tue-lighthouse.nl



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