

Table 1: Description of all actors identified in the i* model

Local authority	The local authorities, <i>i.e.</i> the municipalities through their (deputy) burgomasters and staff, decide on the lighting infrastructure on their territories.
DSO	The distribution system operators (<i>gestionnaires de réseau de distribution - GRD</i>) are designated by the Walloon government as responsible for the management of the gas and electricity distribution systems. ORES operates in 200 of the 262 Walloon municipalities. RESA is the second player on the market. The DSOs are bodies governed by public law. At least 70% of their capital must be held by public shareholders (municipal or provincial). They can be inter-municipal bodies.
Vendor	From a commercial perspective, several actors provide the installers (DSOs) with the required technology. In Belgium, prominent players in the lighting technologies market are <i>Schröder</i> and <i>Signify</i> .
SPW	The Public Service of Wallonia (<i>Service Public de Wallonie - SPW</i>) is appointed by the Walloon government and constitutes the interface between the citizens and the government and a partner for the local authorities.
SPW-ARNE	The SPW-ARNE(<i>Agriculture, Ressources Naturelles, Environnement, i.e.</i> agriculture, natural resources, and environment) gathers expertise on biodiversity and the environment.
NGO and association	The <i>Association pour la Sauvegarde du Ciel et de l'Environnement Nocturne</i> (ASCEN), mostly composed of astronomers, has an active information role in the prevention of light pollution. Other associations, such as Natagora, actively protect wildlife. The Smart Light Hub Interreg project - spreading across territories in France, Germany, Wallonia, and in the Grand Duchy of Luxembourg - is also active in the topic of smart light.
Nature park	Some parks consider the subject of light pollution and public lighting on their territory (<i>e.g.</i> the Parc Naturel des Sources, located in Spa and Stoumont) and organise awareness-raising activities with local associations. They can render a consultative opinion on the local authorities' decisions impacting their territories.
Media	The media help disseminate the information on public lighting issued by the other actors (such as the associations, NGOs, universities, and SPW).
Local citizen	Artificial public lighting affects the local population who must be informed about lighting in their area by the deciders and the other involved actors.
Local citizen association	Under this denomination are gathered citizens especially concerned and active in public lighting and light pollution.
EU	The EU provides funds for university projects in link with lighting. They also act in the standardisation process.
Belgian government	The federal government elaborates standards concerning lighting, which are, in turn, developed by the IBE.
Walloon government	The Walloon government appoints the SPW to implement its political decisions.
Walloon government IBE	The Belgian Institute for Lighting (<i>Institut Belge de l'Eclairage - IBE</i>) is an organisation active in the standardisation of lighting. At the European level, the IBE represents Belgium in the European Committee for standardisation (CEN, <i>esp.</i> CEN TC 169 for lighting) on behalf of the NBN. At the national level, the IBE develops standards previously elaborated by the national authorities in the areas where the CEN has not yet been enacted. The IBE also facilitates the legibility of European standards edicted by the CEN through the development of practical guides. In particular, working group C is dedicated to public lighting.
CWaPE	The Walloon Commission for Energy (<i>Commission Wallonne pour l'Energie</i>) is the official organisation regulating the electricity and gas markets in Wallonia. The CWaPE monitors and controls the DSOs, among others.
Study office for light systems.	Independent study offices offer their services to the local authorities, among others. For instance, Radiance 35 develops its expertise on social cohesion and the preservation of biodiversity in the frame of its illumination projects.
Industrial research centre	An industrial research centre (ENGIE Laborelec) is responsible for certifying new industrial technologies following the standards, testing technologies, and measuring light on sites for the DSOs and the SPW.
Police	The role of the Police is to ensure each municipality's territory's safety. They thus expect the local authorities to provide sufficient lighting levels to progress in this direction.
University	Researchers interested in public lighting complete the ecosystem as external observers to provide guidance towards more sustainable public lighting, raise awareness of the diverse actors and help build the innovation of lighting.