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Understanding Stakeholders – A Broad Picture

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The SUSTAFIT research project assembled a diverse group of sustainable nonwovens value chain stakeholders facing challenges in identifying key industry players across varied application segments. This chapter focuses on pinpointing essential stakeholders in the hygiene and medical segments of nonwovens, aiming to facilitate innovation and sustainability in the nonwovens industry.

Diversity of Stakeholders – A Multitude of Opportunities

When conceptualising the SUSTAFIT research project, a diverse group of stakeholders from the value chain was assembled to create a network focused on studying sustainable nonwovens. However, identifying the key players in the nonwovens industry proved to be a challenging task due to the existence of several distinct application segments within the sector. It became clear, particularly when examining the partner companies' specialised segments, including hygiene and medical, how different these application segments are from each other. Additionally, understanding how to locate the right players was crucial for the project's goal of steering the nonwovens industry toward greater sustainability, with the support of the entire value chain and its varied stakeholders.

Wide range of various players and stakeholders operate in the nonwovens sector. This may impact on sustainability transformation in the field.

This varied nature of the sector is the reason why this chapter concentrates on pinpointing stakeholders who hold critical positions within the nonwovens industry, in the hygiene and medical application segments of nonwovens. The objective of this mapping exercise was to address crucial questions regarding the principal stakeholders who are steering innovation, sustainability, and expansion in the nonwovens sector. Through our experiences in seeking out stakeholders, we recognised that other entities in the nonwovens sector might also benefit from using these tools to identify and engage their stakeholders.

A Practical Tool for Planning: Stakeholder Map

In the realm of stakeholder analysis, there exist various typologies. For this study, we adopted Werther and Chandler's (2011) framework, which identifies three primary stakeholder groups within an organization:

Which of these stakeholder groups do you fit in?

- 1) **Organizational Stakeholders:** This group is the backbone of the organization, consisting of employees, managers, and stakeholder units. They are the internal drivers of the organization's mission and daily operations.
- 2) **Economic Stakeholders:** Key players in the organization's commercial ecosystem, this group includes customers, competitors, creditors, suppliers, and distributors. They are the external entities that directly engage in economic transactions with the organization.
- 3) **Societal Stakeholders:** This group extends beyond economic transactions to encompass governments and regulators, local communities, non-profit organizations, NGOs, and the broader ecosystem. They reflect the organization's social responsibility and its role within the wider community.

Organizational Stakeholders are internal to the organization, while Economic and Societal Stakeholders are external. Economic Stakeholders serve as a bridge connecting the organization with Societal Stakeholders. All three groups operate within a larger tapestry of social, demographic, and technological trends that not only impact the organization but also influence all its stakeholders (Werther & Chandler, 2011).

Stakeholder mapping is a simple yet widely used tool for identifying and understanding the stakeholders in a specific area.

Stakeholder mapping is a critical component of the design thinking philosophy. Recognising all players in the sector and understanding their behaviour, intentions, interrelations, agendas, interests, influence, and resources is essential. This understanding reveals how they can support the organization (Brugha & Varvasovszky, 2000). Armed with this knowledge, you can identify the best partners, manage stakeholders effectively, and understand how future decisions are made. Stakeholder mapping also aids in determining

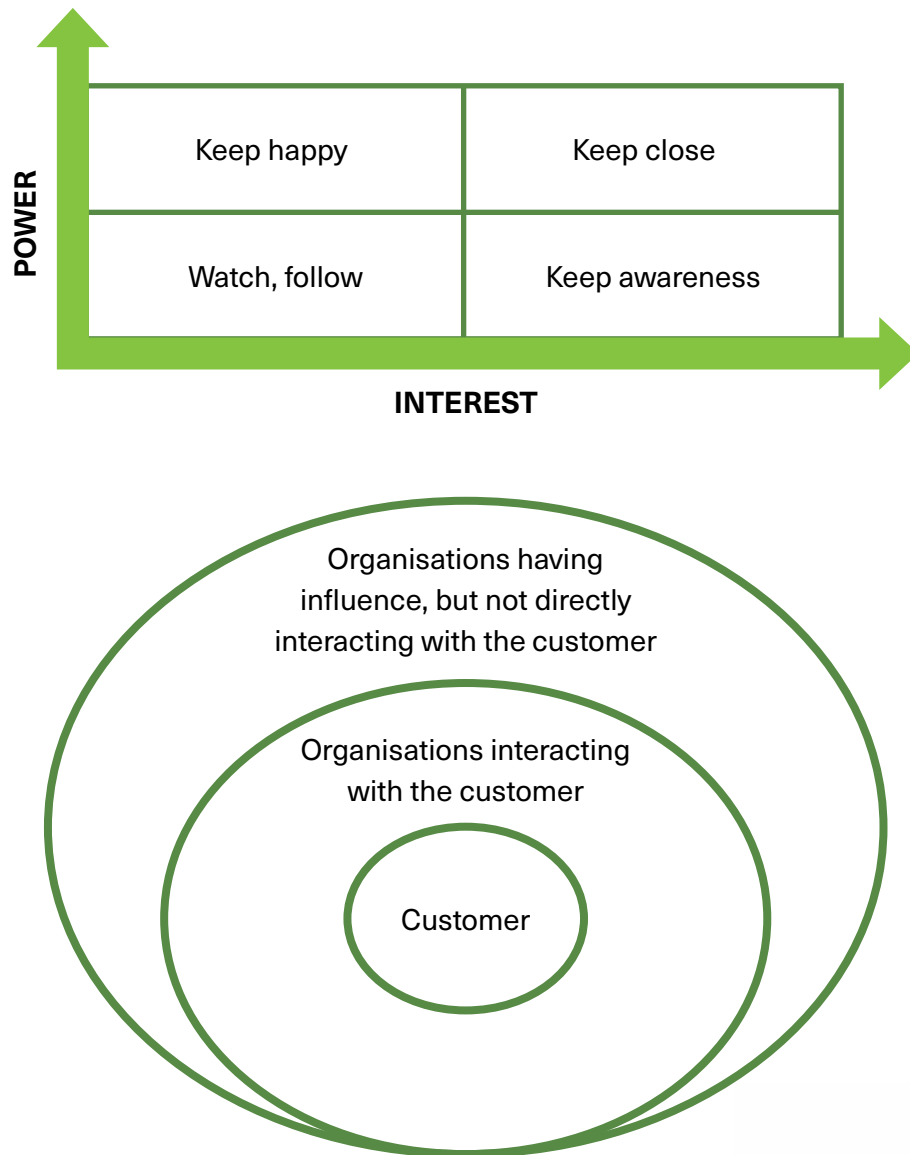


Figure 1. Examples of visual presentations of stakeholder mapping (Source: Own elaboration)

how to collaborate with the different stakeholders. There are various models and templates for visually representing a stakeholder map. Figure 1 offers two simplified examples, demonstrating how stakeholder maps can meet different needs.

The intersection of stakeholder interest in an organization's policy, strategy, or issues, and their capacity to exert influence, creates four distinct categories of stakeholders:

Players:

These stakeholders wield significant power and have a vested interest in the matter at hand. They possess the capability to bolster or undermine the initiative. As the most critical group, they require the highest level of engagement and management by those implementing strategies.

Subjects:

This group has a stake in the issue but lacks substantial influence within the organization.

Crowd:

These are stakeholders with minimal power and interest regarding the current issue. They are more like potential stakeholders rather than active ones.

Context Setters:

Stakeholders in this category have the power to affect change but do not have a direct stake in the specific issue. However, their influence can shape the broader context in which the organization operates. (Ackermann & Eden, 2011).

Nonwovens Industry Renewing Itself

The nonwovens industry is changing when it comes to sustainability. The industry is evolving through the use of new, sustainable raw materials, and there is a need for new innovations that can be sustainable and produced into wide range of different products, in different sectors. There are new players and new stakeholders bringing value to the industry. The initiation of stakeholder mapping within this industry was prompted by the need to understand the key players and acquire a comprehensive understanding of the industry's dynamics. The mapping began with the fundamental question of identifying the influential players shaping the trajectory of the sector.

Did you know that disposable nonwovens account for 65–70% of the overall nonwoven consumption? (S&P Global, 2020)

Single-use nonwoven items like disposable wipes and facemasks pose environmental concerns due to their extensive use of fossil-based plastics, contributing to high carbon footprints, especially when using virgin materials. Improper disposal of these materials

leading to landfill and ocean pollution exacerbates the problem by releasing microplastics, harming animals, and the environment. (Raipale, 2023).

This chapter aims to identify stakeholders that occupy pivotal roles in the nonwovens industry. This mapping was developed to answer important questions about the key stakeholders guiding innovation, sustainability, and growth in the nonwovens sector. This review focuses on two nonwovens segments – hygiene and medical.

The medical segment has a wide range of applications including:

- dressings
- surgical masks and gowns
- surgical drapes
- hygiene segment incl. feminine hygiene products
- nappies/diapers
- adult incontinence products

This review was not merely an academic pursuit, but rather a strategic necessity for anyone aiming to navigate the intricate landscape of the nonwovens industry. We concentrated on single-use nonwoven items. For this chapter, we restricted stakeholder mapping to only include companies, and excluded political actors or other influencers.

Mapping the Stakeholders in the Field

To map the company stakeholders in the nonwovens industry, we selected the power/interest grid as our analytical. This model not only aids in identifying stakeholders, but crucially outlines key strategies for managing different categories of stakeholders effectively. The model's development recognises that considering the vast array of stakeholders in organizational management is a challenging and an intricate endeavour. The two most critical variables identified for effective stakeholder management are power and interest. These factors are then used to construct the power/interest grid, which is illustrated in Figure 1.

Our stakeholder mapping efforts began with a survey of internal stakeholders at SUSTAFIT. The survey revealed that two segments of the nonwoven industry, hygiene and medical, were deemed essential and merited a thorough investigation. This insight provided the foundation for writing this chapter. The chapter's approach is not scholarly in nature but rather serves as a practical illustration of how stakeholders in the nonwovens industry can be identified and mapped.

Application Segments in Stakeholder Mapping

Hygiene – The Most Significant Market Share in Europe in the Nonwovens Industry

The hygiene segment we examined primarily includes nappies/diapers, feminine hygiene, and adult incontinence products. According to EDANA (2023), this segment stands out as the most substantial, consistently maintaining significant European market shares (including exports) in both weight (28.5% of total delivery in tonnes) and surface area (57.6% in square metres). Notably, within the hygiene segment, baby nappies/diapers command the highest market share, accounting for 62.9% in tonnes and 69.3% in square metres. It is worth mentioning that wipes for personal care, although not considered in this stakeholder study, represent another noteworthy segment.

Medical – Face Masks and Surgical Gowns in Daily Usage

The medical application within the nonwovens industry encompasses a diverse range of end-use products, including surgical gowns and drapes, face masks, wound care items (bandages, dressings, swabs, etc.), and various other medical and surgical products. According to EDANA (2023), spanning almost a decade from 2010 to 2019, the annual sales of European nonwoven medical applications remained consistently around 2,000 million square metres. However, the unforeseen surge in demand for medical products during the COVID-19 pandemic led to a substantial increase, reaching 12,000 million square metres during the period of 2020–2021. Although the sales have seen a decrease since then, they still surpass pre-pandemic levels.

Stakeholder Mapping: Understanding Key Players in the Nonwovens Industry's Value Network

The stakeholder map resulting from our study is illustrated in Figure 2. We found several **big players** in the nonwovens industry within our selected segments. Kimberly Clark, Suominen, Berry Global, etc. amongst many more globally were recognised as key players, each contributing distinctively to the multifaceted landscape of nonwoven applications. The objective was to comprehend their market presence, innovation strategies, and global influence, acknowledging that a profound understanding of these companies is integral to unravelling the industry's potential and challenges.

Raw Material Suppliers (e.g., Berry Global & Suominen) are positioned at the top of the map, providing essential raw materials, machinery, and equipment necessary for nonwoven production. They play a pivotal role in supplying vital components and resources to nonwoven manufacturers.

At the centre of the map are **the Big Players** or Market leaders (Kimberly Clark, etc.), comprising of companies holding a substantial market share. These entities significantly influence the overall landscape of the nonwovens industry.

Then, there are the **Manufacturers** (e.g., Berry Global & Suominen), companies actively involved in the production of nonwoven materials and the supply of nonwoven products to various industries and B2B customers. Notably, an overlap with the big players suggests that some companies manage most processes in-house.

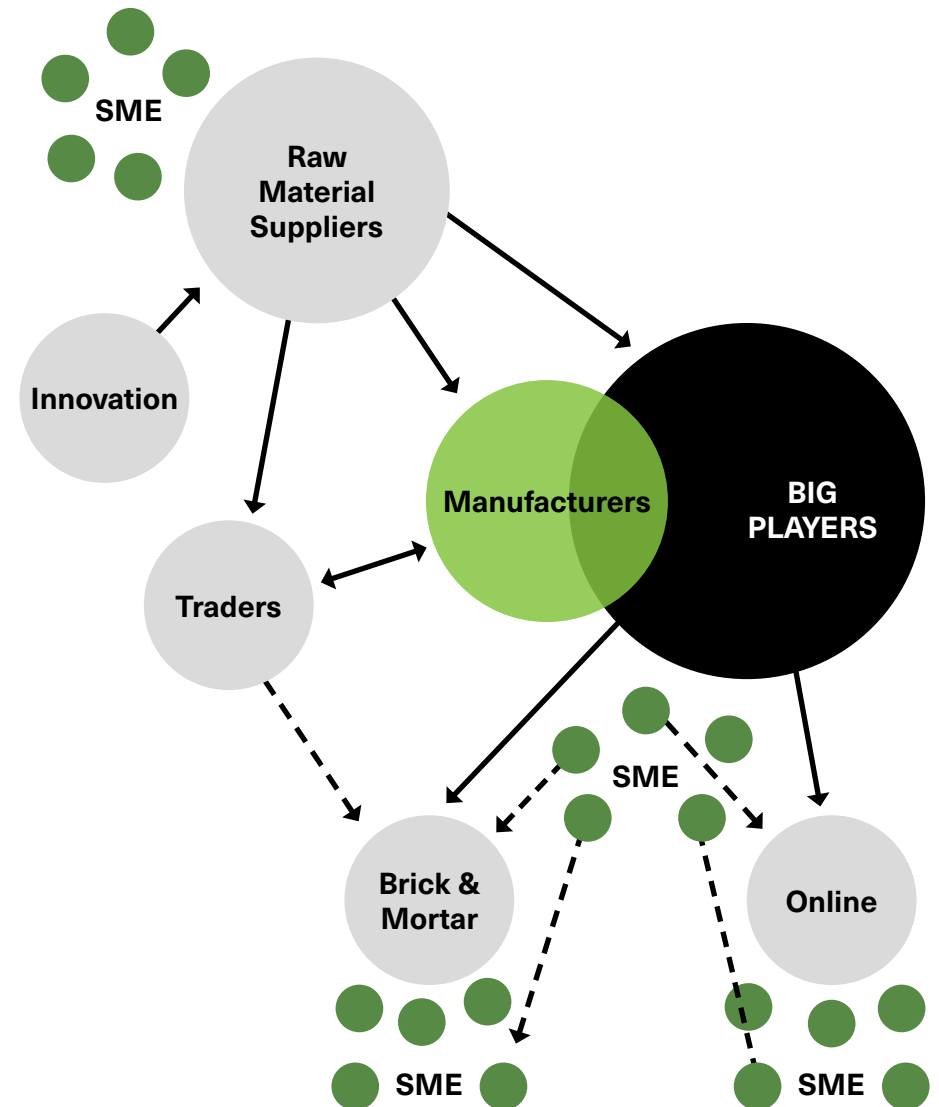


Figure 2. Stakeholder map in the application segments of medical and hygiene (Source: Own elaboration)

Adjacent to raw material suppliers and manufacturers are the **Traders**. These intermediaries serve a critical function in facilitating the distribution of nonwoven products from manufacturers to end-users. Traders contribute to broadening the market reach.

Additionally, a subset of stakeholders falls under the category of **Innovators**. These are companies (Valmet, etc.) not directly affiliated with the nonwovens industry but ones that have introduced applications or machinery designed to enhance specific functions within the nonwovens sector. The distribution channel is bifurcated into two categories: **Brick & Mortar** and **Online**. Brick & Mortar encompasses department stores for hygiene products and pharmacies catering to the medical segment. On the other hand, the Online channel includes major distributors such as Amazon, facilitating a digital avenue for product distribution. Although our mapping exercise's primary focus was on major stakeholders, it is worth noting the presence of numerous Small and Medium Enterprises (SMEs) amongst the raw material suppliers and traders, both in manufacturing as well as in distribution.

The stakeholder mapping initiative in the nonwovens industry, particularly within the hygiene and medical segments, offers crucial insights into market dynamics, innovation strategies, and the global influence of major players such as Kimberly-Clark, Berry Global, and Suominen. The adaptability of the nonwovens industry, demonstrated during the surge in demand for medical products during the COVID-19 pandemic, highlights the industry's resilience. Identifying stakeholders, including raw material suppliers, major companies, manufacturers, traders, and innovators, makes visible the interconnected web that sustains the industry.

Value Network in Action: More Chances for New Players

In this chapter we show how the nonwovens industry and its value chain differentiates from the traditional value chain model. Our stakeholder mapping work shows how the nonwovens industry follows a value chain model, but acts more like a value network (see also Ricciotti, 2019).

Based on our review, the value network provides more possibilities for different companies to bring more value for other companies in the value network.

In a traditional value chain, value creation has been laid out in a traditional 'buyer-supplier' partnership model. However, in a value network model, which seems to be the model the nonwovens industry has adopted, value co-creation and co-development between bigger and smaller players is highlighted.

Based on our findings we suggest that companies looking for new business in sustainable nonwovens can strategically target partnerships with major players. Collaboration with Raw Material Suppliers and Manufacturers is beneficial for the development of new raw material utilisation.

Tap into business opportunities: New companies can develop partnerships with big players, too!

We suggest that the mapping initiative also adds value to the companies in the nonwovens value network in several different ways. For example, stakeholder mapping empowers companies to tailor products and services, explore strategic collaborations, and adapt innovative solutions to navigate the complex nonwovens landscape effectively. Opportunities for partnerships with numerous SMEs among Raw Material Suppliers and Traders highlight potential avenues for growth and sustainability.

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