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The branding pyramidal tool kit for enhancing actors' agency in regional energy transitions within the Nordic Battery Belt

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This article investigates how to enhance the agency of regional actors in the branding of the 'Nordic Battery Belt' (NBB), the region where the industry, considered a new green path, is emerging. Branding will enhance the attraction of skilled workforce, investment, market, and increased public awareness of the industry's contribution to decarbonization. While national battery strategies have been developed to promote the industry, the tool kit that can enhance the implementation of the strategic branding action plan is underexplored. Firstly, this article develops a tool kit based on the directed content analysis, which ensures the use of existing branding theory and its pyramidal components: attention, awareness, associations, attitudes, and relationships. Regional actors can leverage the tool kit as it reduces oversight and increases lucidity and conciseness. Secondly, the paper develops a conceptual framework through a multidisciplinary approach to elaborate on the importance of the tool kit for enhancing actors' agency in regional branding. The paper is relevant for regional actors, e.g., development agencies within the Nordic region that are saddled with the responsibility of place branding.

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Introduction

The battery industry will play an integral role in the decarbonization process by accelerating the adoption of renewable energy (Stephan et al., 2019), especially in electric mobility, e.g., electric vehicles (Bridge and Faigen, 2022), electric aviation (Okonkwo, 2023), and the maritime sector, e.g., the Aurora Bothnia ship that operates in the Gulf of Bothnia between Vaasa, Finland and Umeå, Sweden (Wasaline, 2022) and the Norwegian shipping vessels (Sæther and Moe, 2021). Despite the decarbonization benefits of batteries, studies are still critical whether the industry's activities exacerbate the environmental issues it is intended to solve viz-a-viz the effect of extractivism (Dunlap and Riquito, 2023; Hornborg, 2024) and whether economic gains are the overriding motivation for developing the industry (Caprotti and Bailey, 2014; Dunlap, 2023; Kenis and Lievens, 2015; Riofrancos, 2023). While the author alludes to these environmental challenges, the scope of this paper is to highlight how actors can promote the upside of decarbonization via battery production, an enterprise emerging in many regions across Europe (Löfmarck et al., 2022).

Take the Nordic region as an example, where the demands for battery technologies are increasing, and in response, the region is getting more involved in developing domestic battery production clusters (Viegand, 2022). The industry will increase the supply of energy storage products and services from within the region rather than relying on imports from the Asian market (Beuse et al., 2018). Although the battery industry is emerging in

different parts of the Nordic region, nonetheless, due to the similarities in the region's development trajectory, the paper focuses on the Nordic battery belt (see Fig. 1), comprising the regions of Central Ostrobothnia and Ostrobothnia in Finland, Västerbotten County in Sweden, and Nordland County in Norway (Löfmarck et al., 2022). The industry is an emerging green path, i.e., a development that contributes to a low-carbon economy through the optimal utilization of resources, environmental sustainability, and social inclusiveness (United Nations Environmental Program, 2011). Regional potentials support green path development (Grillitsch and Hansen, 2019), as well as the different policy approaches and measures adopted by regions (Capasso et al., 2019; Gibbs and O'Neill, 2018), which are influenced by the institutional capacities (Tripl et al., 2020). Additionally, regional actors as change agents facilitate the development of new paths by deliberately constructing social and economic conditions, such as policies that facilitate green path development (Sotarauta et al., 2021, p.93; Tripl et al., 2020).

As the battery industry is being developed, the markets and financial investments are not automatically given; hence, regions need to accelerate the opportunities and attractiveness by increasing visibility (Löfmarck et al., 2022). Research has examined the importance of branding for increasing the visibility of a region's socio-economic development (Margarisová and Vokáčová, 2016); subsequent studies note that branding is a creative way to disseminate information on a region's sustainability strides (Paasi et al.,

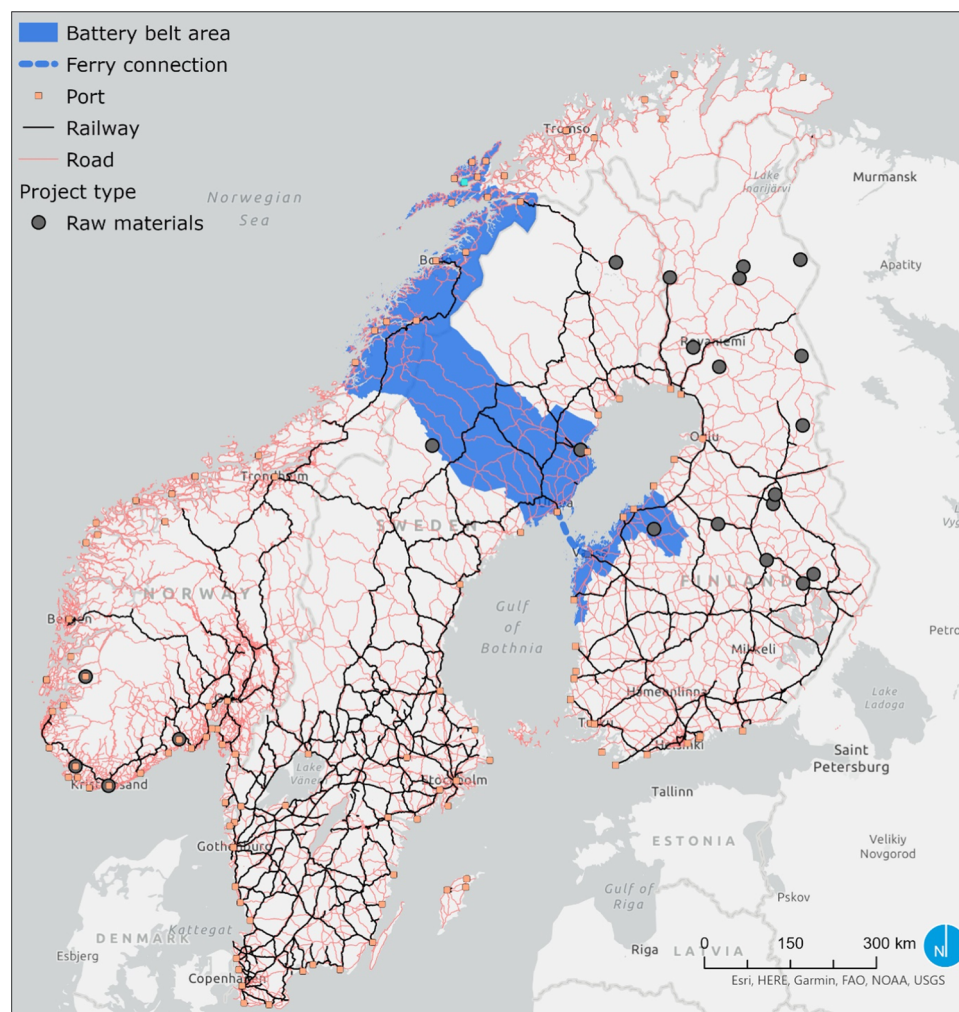


Fig. 1 The Nordic Battery Belt (Löfmarck et al., 2022, p.17).

2018). Scholars posit that regions are distinctive and less complex than the entire country, making them more stable and easier to manage; in other words, regional branding highlights distinctiveness (Caldwell and Freire, 2004). Additionally, branding regions could highlight and attract attention to an emerging innovation space (Wäckerlin et al., 2020), mainly because regions face stiff international competition in attracting business and investments; hence, policymakers are saddled with improving regional economic opportunities through branding strategies (Cleave et al., 2016).

Within the Nordic context, studies suggest the importance of increasing the visibility of regional decarbonization activities (Kvarken.org, 2022c), particularly for industries that are transitioning to become reliant on batteries, e.g., the technological transition in the aviation industry from carbon-based to electric aviation (Kvarken.org, 2022a; Okonkwo, 2023). Branding the battery belt is essential for attracting skilled talents, investments, and market (Kvarken.org, 2022b; Löfmarck et al., 2022) by focusing on areas such as the region's soft skills and favorable conditions for battery production (Löfmarck et al., 2022). Branding also increases consumer awareness of sustainable decisions (Viegand, 2022). The region's progress and achievements in the decarbonization process via the battery industry can also be promoted to increase the knowledge of its energy transition activities (Kvarken.org, 2022c). For example, hosting events at educational institutions, corporate organizations, and cross-border discussions (Löfmarck et al., 2022).

Although the existing research highlights the importance of regional branding and the importance of promoting the Nordic Battery Belt (NBB), the tool kit that can enhance actors' (Okonkwo, 2022, p. 59) agency in implementing strategic branding action plans is underexplored. A tool kit is a collection of standards, guidelines, or flexible materials that offer resources to aid in developing and putting into practice a plan of action or intervention in a specific circumstance (Thoele et al., 2020). A tool kit contributes towards a "better understanding of what actors can do to transform and reinvent a region" (Sotarauta et al., 2019, p. 2); it also reduces the chances of an oversight in planning. Enhancing actors' agency is essential, especially looking at its numerous importance, e.g., in creating development opportunities (Suitner et al., 2022), influencing the regional energy transition process (Coenen et al., 2021 p. 222), constructing and coordinating discourses and narratives on the decarbonization process (Sotarauta et al., 2021).

This paper develops a tool kit to enhance actors' branding strategic action plan against the backdrop that branding will concretize the region's economic strengths and increase the visibility of the emerging Nordic battery industry (Löfmarck et al., 2022). Region is used in this paper to denote a place using Murphy's (2015, p.83) definition, which refers to a place as a "geographical entity that serves as the contexts wherein the practices, norms, conventions, rules associated with socio-technical regimes are situated." A place, therefore, provides the context for regional branding. The following question guides the study: *How can the pyramidic tool kit enhance actors' agency in the regional energy transitions viz-a-viz branding the NBB?* As Sotarauta et al. (2019, p. 2) observe, "no one-size-fits-all theories and models to be readily implemented for transforming regions towards greater sustainability." The research questions are thus answered through the cross-pollination of knowledge by combining insights from the branding literature and the agency perspectives from energy transitions literature. The rationale is that multidisciplinary approaches "combine expertise across and beyond social sciences and may increase the understanding of regional development" (Chlebna et al., 2023, p. 230). Leveraging such an approach can facilitate the branding of regions (Margarisová and Vokáčová, 2016).

On the one hand, the paper develops a conceptual framework to increase understanding of the importance of the tool kit in implementing the strategic branding action plan for the NBB. On the other hand, empirically, the study provides a guide that regional actors can leverage. The remaining part of the article includes the Nordic battery context, the conceptual framework developed from the branding and agency perspectives, the materials and methods, the pyramidic tool kit, the discussion, and the conclusion.

The Nordic battery context and the branding needs

Different factors support the development of the battery industry in the region, e.g., a clean energy mix that supports the industry (Aslani et al., 2013a; Aslani et al., 2013b; EnergyVaasa, 2019), raw materials, e.g., cobalt, nickel, lithium, graphite, copper, and vanadium (Battery Norway, 2023; Löfmarck et al., 2022). The regional authority plays a vital role in providing governance in various areas. Firstly, they oversee the infrastructural development, e.g., roads, for improved access to the industry (VASEK, 2023). Secondly, they allocate land to investors for the construction of the Giga factory, and the rationale is to have a harmonized and well-coordinated land allocation, with ease to transport infrastructure and connection to the market; so far, a site sitting on 318 hectares has been allocated (GigaVaasa, 2022). Many companies are keen on investing in the industry. For instance, in the Vaasa region of Finland, a private investor, e.g., a Chinese company, is already keen on leveraging the allotted lands for constructing an anode material production plant that will employ 1200 staff (Varjonen, 2023). The construction cost for the plant will amount to 1.3 billion euros with 100,000 tons in annual production (Niemi, 2023). In Skellefteå, Sweden, the first home-grown giga factory is operated by Northvolt, covering over 500,000 square meters. The company has over 3500 employees, and its power consumption amounts to 360 megawatts from renewable energy sources, equaling 1.5% of Sweden's total energy production (Northvolt, 2024). Freyr is also leading the development of batteries in Norway (Jani et al., 2019). The company has two industrial production sites in Mo i Rana, Northern Norway, i.e., the Giga Arctic in Sentraltomta and the Customer Qualification Plant (CQP) located in a 13,000 square meters building consisting of an industrial scale production line, Quality test lab, and tester for life cycle of battery cells (Freyr, 2024).

The industry has high prospects, albeit with some challenges, which include pollution-related issues, the geopolitics of the supply chain of materials (The International Renewable Energy Agency, 2023; Viegand, 2022, p.28), ensuring ethical procedures for critical material supply from outside the region (Dehaine et al., 2020), connectivity challenges (Okonkwo, 2022), and low visibility of the emerging industry (Battery Norway, 2023, p.28) necessitating the need for "strengthening the brand and communications about the industry (Löfmarck 2022, p.12). As shown in Table 1, the Nordic region recently published national battery strategies that emphasize the need for regional branding.

For instance, the Ministry of Economic Affairs in Finland has developed a five-year battery strategy spanning 2021–2025 to strengthen the battery industry, increase its international visibility, and accelerate the decarbonization process towards meeting the climate objectives. The strategy has five objectives, and the most relevant for this paper is strategic objective four, which aims at promoting the country's battery brand (Ministry of Economic Affairs and Employment 2021). Strategic action number six is one of the measures to achieve the above national battery strategy. It focuses on "developing the Finnish battery and electrification cluster brand to attract the needed workforce" (ibid, p. 25). The policy document provided the possible pathways to achieve the objectives, which include increasing the volume of targeted

Table 1 The branding needs and strategies in the Nordic region (own source).

Country	Branding needs	Strategies	Document
Finland	International Visibility.	a. Accelerated & targeted communication. b. Emphasis on the futuristic economic potential of the industry.	Ministry of Economic Affairs & Employment of Finland 2021, p. 18.
Norway	Increased positive perception.	a. Increased communication of the country's Attractiveness for business. b. Optimize its overseas resources to market the industry.	Regjeringen.no, 2022, p.48.
Sweden	Market Sweden's strength.	a. Promote battery as a sustainable industry. b. Continues collaboration between stakeholders.	Fossil Free Sweden, 2020, p.37-38.

communication on the sector's strengths and organizing more local events and international conferences (ibid, p. 25).

Similarly, the Norwegian battery strategy was enacted in 2022 to advance green transitions through a profitable and attractive battery industry (Regjeringen.no, 2022). Norway is taking the lead in electric vehicles, and the battery industry is expected to boost the green transition (Figenbaum, 2020). The strategy has ten measures, and the most relevant for this paper is strategic action two, aimed at creating a positive perception of Norway by "promoting Norway as an attractive host country for green investments" (Regjeringen.no, 2022, p. 48). In addition to increasing companies' visibility, a new national brand program called 'Made in Norway' was launched (ibid).

Lastly, the Swedish national strategy shows that the country aims to become fossil-free by replacing oil with electricity backed by batteries. The strategy has five main recommendations; numbers two and four are focused on attracting skills and investment to the region. The fifth recommendation in the strategy is the most relevant for this paper, and it focuses on marketing batteries as a sustainable industry through collaboration and dialog (Fossil Free Sweden, 2020). The national strategies of the three countries have similar objectives and unanimously suggest that the demand for batteries is increasing, and advancing the cluster requires strengthening the industry supply value chain through bilateral agreements and promoting the industry (Battery Norway, 2023). The tool kit will increase the industry's visibility by enhancing the actors' agency in implementing the strategic branding action plan in the national battery strategies.

Towards a conceptual framework for inspecting the importance of the tool kit

Branding. A brand is an "identifiable good, service, person, or location" enhanced so that the user or customer perceives pertinent, unique, and added values that most closely correspond to the needs (Caldwell and Freire, 2004, p. 51). It is also seen as a "broad complex of variables, which are used in the building of an identity as a basis for creating a value proposition" (Margarisová and Vokáčová, 2016, p. 2060). Other scholars have also defined a brand as a "product or service distinguished by and marketed based on a distinctive and enduring personality" (Lerman et al., 2017, p. 1). A brand differentiates itself from others regarding its functional, economic, and psychological benefits (Botha et al., 2011). Regional branding, therefore, is one of several ways to promote regions and support the socio-economic development in regions that are "interesting due to the natural and cultural heritage" (Margarisová and Vokáčová, 2016, p. 2059). Regional branding is essential for various reasons. Firstly, it has been argued that even though sustainability presents various product and service alternatives to the public, it is not always easy to influence people's behavior; hence, branding becomes an effective tool to communicate the value (Margarisová and Vokáčová, 2016). Secondly, humans are rational and emotional when

making decisions about a product or service; thus, branding becomes a vital and convincing tool for persuasion and impression (Lerman et al., 2017). Thirdly, branding confers more excellent value to products, services, and places than nonbranded counterparts (Lerman et al., 2017) and is a means to attract businesses (Cleave et al., 2016).

The needs of people vary in every society; hence, as studies suggest, an effective branding strategy is context-based, taking cognizance of the prevailing needs and thus connecting with the people's interests (Cleave et al., 2016). Furthermore, it effectively uses language and symbols, such as graphics and words, that produce a convincing, innovative, appealing, and compelling outcome (Lerman et al., 2017). Studies suggest that multi-disciplinary knowledge can improve a region's competitiveness, e.g., a brand can be developed through various methods and the collaboration of various actors (Margarisová and Vokáčová, 2016). Within the Nordic context, regional actors are working towards promoting the battery belt and the industry through branding as contained in the action plans of the national battery strategies (Fossil Free Sweden, 2020; Regjeringen.no, 2022). That being the case, this paper uses the branding pyramid to enhance the actor's agency in developing the branding action plans.

Regional actors as change agents. Agency is purposive and intentional human action with clearly defined goals (Suitner et al., 2022). The agency of actors contributes to energy transitions (Hewitt et al., 2019), facilitates institutional change (Moss et al., 2015), and ensures the construction of possible situations or imaginaries (Hecht, 2009; LeMenager, 2013; Sovacool et al., 2020). Regional actors influence energy transitions by shaping the trajectory (Coenen et al., 2021). Currently, these roles are increasingly vital due to the rapid changes within the energy industries across the globe, and these changes are profoundly captured by conventional and social media (Sovacool et al., 2020, p. 4–14). For instance, actors exercise agency through participation in technological innovations leading to the co-production of energy systems (Miller et al., 2015) that contribute to the climate objectives (Geels et al., 2019; Schot and Steinmueller, 2018). Agency is also exercised in constructing and shaping energy transitions (Coenen et al., 2021), influencing the actions of others (Latour, 2007), as well as facilitating the understanding of the significance of renewable energy (Coenen et al., 2021).

Change agents play an essential role in new path development by creating opportunity space for change (Jolly et al., 2020; Suitner et al., 2022). There are three types of change agents: Innovative entrepreneurship, Institutional entrepreneurship, and Place-based leadership (Grillitsch and Sotarauta, 2020). In this paper, regional actors are regarded as place-based leaders who foster the development of the battery industry. Place-based leadership is increasingly essential for various reasons. Firstly, regional actors as change agents provide leadership that fosters new paths by providing favorable conditions (Dawley, 2014). For

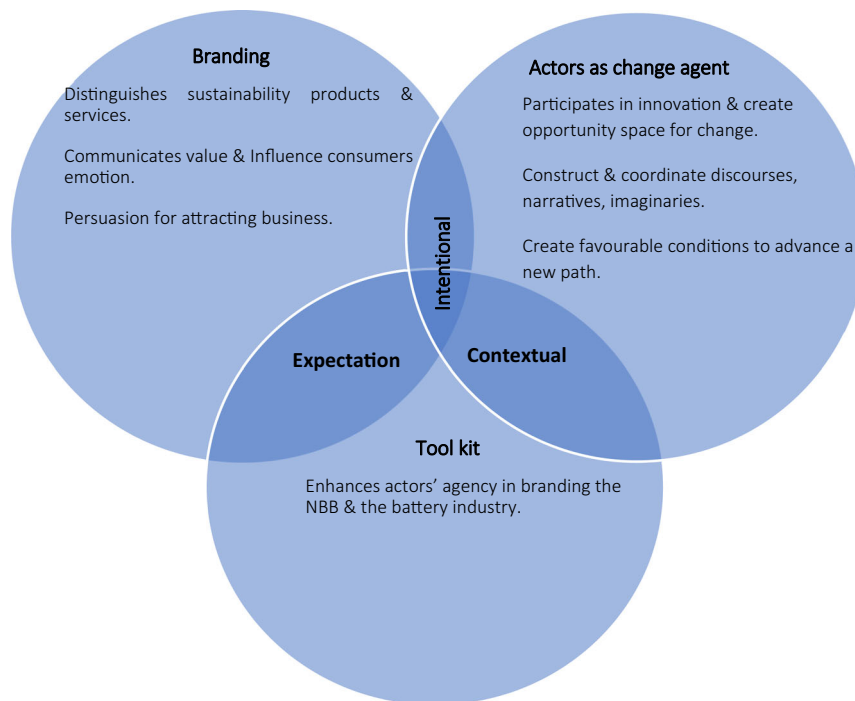


Fig. 2 The conceptual framework: intentionality, contextuality, and expectation (own source).

instance, actors “pool competencies, powers, and resources for creating a strong environment for the firms to innovate and grow” (Grillitsch and Sotarauta, 2020, p. 710). Secondly, actors construct and coordinate the discourses and narratives on the importance of energy transitions by promoting new paths (Sotarauta et al., 2021). Such “discourses and visions are designed to appeal to the mass public” (Coenen et al., 2021, p. 220). Furthermore, place-based leadership “mobilizes heterogeneous actors to pool competencies and collective resources for a common goal and negotiate with different actors at the regional level to support regional growth” (Jolly et al., 2020, p. 178).

Energy transition is embedded in the regional context, leading to diverse contexts and associated complexities (Coenen et al., 2021). Due to this diversity, contextual analysis is essential to understand the factors that drive regional energy transition, such as actors’ roles and agency (ibid). Furthermore, the current situation within a context can be influenced by the expectations held by people (Van Lente, 2012). Expectations are future projections crucial for socio-technical transformation and are the building blocks for more extensive narratives (Sovacool et al., 2020). From the preceding, while the agentic roles of regional actors are well established, how to strengthen the agency is underexplored, particularly within an emerging new green path, e.g., the battery industry in the Nordic context. Consequently, the tool kit developed herein can enhance the branding of the strategic action plan for advancing NBB and the industry. Promoting the NBB can also influence the knowledge and expectations of the public viz-a-viz the emerging battery industry.

Intentionality, contextuality, and expectation (ICE). Figure 2 shows three branding and actor agency concepts essential in developing a tool kit: contextuality, intentionality, and expectation. The author explicates these concepts in a nutshell.

Firstly, branding is a means of communication designed to reflect the prevailing contextual realities, such as local concerns. It also serves the purpose of disseminating information on ongoing and future development and the goals that are intended to be achieved. In other words, branding is a means through which

regional actors exercise agency in fostering the battery industry based on contextual needs, and the tool kit serves as an enabler for realizing this goal. Actors’ agency, on the other hand, does not spring up from the vacuum. Instead, it is contextually based in response to societal demands such as environmental sustainability and the need to decarbonize. Thus, the actors’ agency in shaping the transition trajectory (Coenen et al., 2021) is contextualized to reflect the circumstances and goals pursued. At the core of both branding and actor’s agency lies intentionality of purpose, meaning engaging in any of these activities is usually a well-articulated line of action with clearly defined goals and objectives. For example, branding the Nordic battery belt raises explicit awareness of the emerging industry. Consequently, actors exercise agency via involvement in constructing the discourses and narratives on the importance of the industry (cf. Sotarauta et al., 2021) and creating opportunity space for change (cf. Jolly et al., 2020; Suitner et al., 2022); these roles could serve as one of the pathways for actualizing the branding objectives.

Actors analyze the context when developing a tool kit, and this requires the understanding of the societal values, norms, and needs as these are essential factors to consider for achieving effective communication and creating the desired impression on potential investors and other stakeholders whose participation is essential in the development process of the industry. The designed tool kit is structured to reflect and fit into the NBB context. Lastly, having a publicly available branding tool kit accessible to the public could increase stakeholders’ expectation that the information contained in the branding message was meticulously developed, taking cognizance of the prevailing concerns. For the policymaker, the tool kit increases confidence in the branding process because it reduces the chances of oversight of essential details and ensures the inclusion of the necessary actions towards achieving the branding strategic action plan.

Materials and method

As a researcher interested in regional energy transition and how it unfolds across geographies, this paper adopts a multidisciplinary

Table 2 Inspected documents for developing the tool kit (own source).

Focus of literature	Relevance to study	Document
Contextual factors that support the development of the battery industry.	Highlight the visibility challenges of the battery industry.	Löfmarck et al., 2022; Viegand, 2022.
Contextual factors that support the development of the battery industry.	Insights into the region where the tool kit will be utilized.	Aslani et al., 2013a; Aslani et al., 2013b; Battery Norway, 2023; EnergyVaasa, 2019; Löfmarck et al., 2022; Okonkwo, 2022.
National battery strategies.	Highlights the branding objectives in the region.	Fossil Free Sweden, 2020; Ministry of Economic Affairs & Employment of Finland 2021; Regjeringen.no, 2022.
Branding pyramid.	Themes used in developing the tool kit.	Lerman et al., 2017.
Regional branding.	Insight on the benefits of regional branding.	Cleave et al., 2016; Lerman et al., 2017; Margarisová & Vokáčová, 2016, p. 2060.
Regional actors as change agents.	Insight on how actors advance narratives and discourses in energy transition.	Coenen et al., 2021; Dawley, 2014; Jolly et al., 2020; Latour, 2007; Sotarauta et al., 2021; Sovacool et al., 2020; Suitner et al., 2022.

perspective to advance new insight on strengthening actors' agency in decarbonization. Since the paper is a qualitative study based on a secondary source, adopting a methodology that effectively combines perspectives from different disciplines to establish a conceptual framework became an essential consideration for the author, especially as the paper is expected to be relevant for an array of potentially interested readers, that may be either interested in regional energy transitions or keen to engage with branding scholarship. That being the case, this paper is based on qualitative content analysis (QCA) because it is a flexible method that ensures the analysis and interpretation of meaning from text (Assarroudi et al., 2018). QCA has three approaches: conventional, summative, or directed (Hsieh and Shannon, 2005). Directed content analysis (DCA) was used because the research focuses on cross-pollinating knowledge from branding discipline and regional energy transitions. Also, it is a well-structured method that supports and extends existing theory by identifying key concepts, themes, and the operational definition (Hsieh and Shannon, 2005) and application to a new context (cf. Humble, 2009). The three steps of directed content analysis were followed in developing the tool kit (Assarroudi et al., 2018). Firstly, the preparation phase involves mastering the content analysis approach. In this regard, highly cited articles on QCA were scrutinized to understand its suitability for place branding; other documents inspected include scientific articles and official reports that contributed to developing the conceptual framework and the tool kit, as shown in Table 2.

Secondly, the organization phase involves scrutinizing the literature on branding to derive the themes and categories. The works of Lerman et al. (2017) were included in the study as they provided the essential background for understanding the concept of the branding pyramid; they were also helpful in developing the themes for the tool kit. For example, essential points were highlighted, and the idea from the literature formed the basis for modeling the branding pyramid for the battery industry, leveraging the idea from the existing themes (attention, awareness, associations, attitudes, and relationships) (Lerman et al., 2017). In addition, Cleave et al. (2016), Lerman et al. (2017), and Margarisová and Vokáčová (2016) were inspected as their studies contribute insight into the imperativeness of regional branding. Due to the interdisciplinary nature of the study, which deals with branding to promote green industry and the region where they are domiciled, studies that highlight the role of regional actors as change agents viz-a-viz how they shape the narratives and discourse in energy transition were included because they can leverage such roles for branding the emerging battery industry, e.g., Coenen et al. (2021); Dawley (2014); Jolly et al. (2020); Latour (2007); Sotarauta et al. (2021); Sovacool et al. (2020); Suitner et al. (2022). Lastly, the conceptual framework was

developed by combining ideas from the branding and regional energy transitions literature to discuss the importance of having a guide for regional actors. The last stage is the result-reporting phase (Assarroudi et al., 2018), which involves using the themes in the pyramid to develop the guides that regional actors can leverage. The snapshot of the tool kit was presented in Fig. 3 to facilitate comprehension of the idea.

Results: The branding tool kit for the Nordic battery belt

The branding pyramid was used to develop a tool kit to enhance the actors' strategic branding action plan for the Nordic battery belt. The staircase-shaped pyramid in Fig. 2 was inspired by an existing design, and the main components are attention, awareness, associations, attitudes, and relationships (Lerman et al., 2017).

Attention. At the pyramid's base is attention, the first stage when developing a branding strategy, which entails "taking notice" (Lerman et al., 2017, p. 4). Sustainability products and services present alternatives to the public, and this is due to the intense competition between various brands; hence, for a brand to attract the attention of the public requires conscientious efforts in attracting the attention of relevant stakeholders (Margarisová and Vokáčová, 2016). Evidently, "all countries are competing to establish themselves in the future green industry" (Regjeringen.no, 2022, p. 48). The reason is that battery continues to play an increasing role in decarbonization, leading to more demand for its products and services (Löfmarck et al., 2022). Consequently, these high demands contribute to the emergence of more battery clusters worldwide (cf. Bridge and Faigen, 2022). That being the case, the Nordic battery industry must compete with other clusters in the European and international markets. Actors as change agents create discourses and visions that appeal to large audiences (Coenen et al., 2021). One option to actualize this is through the effective use of language to promote the emerging cluster. For instance, Norway, Sweden, and Finland share similar features such as governance structure, proximity, and historical cooperation (Aula et al., 2020). However, these countries have different albeit similar languages (cf. The Nordic Council and the Nordic Council of Ministers, 2024); hence, within each country, it is imperative to use the local language to keep most of the populace informed about the NBB. The English language can complement this strategy as the lingua franca in interconnecting the region towards reaching a wider audience nationally, regionally, and internationally. The rationale is that the Nordic region has a sizeable migrant workforce and international organizations; hence, if there is an asymmetry or one-sided use of local language for branding the battery belt and industrial cluster, the optimal expected results in attracting mass

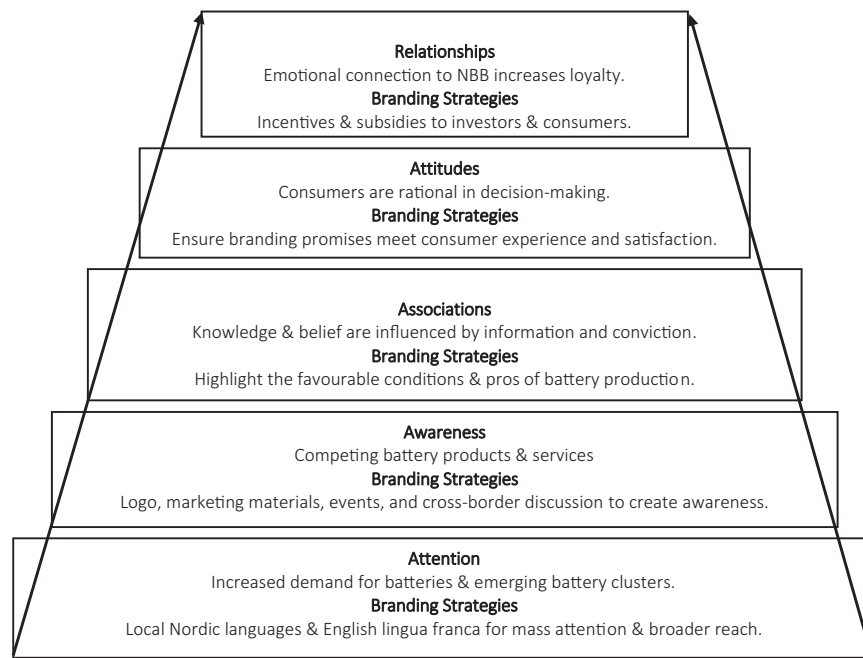


Fig. 3 Branding Pyramidal tool kit for the NBB inspired by Lerman et al. (2017, p. 3).

attention may become elusive. To attract increased attention, it is imperative for the information that is being disseminated in the branding message to be enticing, concise, and easy to remember.

Brand awareness. The second stage in the pyramid is brand awareness, which is the “degree to which consumers recognize a brand and correctly associate it with the right product” (Lerman et al., 2017, p. 4). Various suggestions have been proffered for raising awareness about the battery industry and NBB, such as marketing the region on various international platforms, establishing discussion forums, lobbying, cross-border discussions, and using marketing materials (Löfmarck et al., 2022). The Skellefteå municipal authority already plans to organize the Society Expo 2026 as a space where multi-level actors will converge to raise awareness via discussions about the industry (Renström, 2024). Beyond physical convergence, regional actors can also rely on conventional and social media to raise awareness, e.g., as Sovacool et al. (2020) suggest, the latter is increasingly leveraged to highlight the dynamism within the energy industry. A glimpse through the websites of some regional institutions shows they engage the public with updates in the industry development process, e.g., trends with investors’ engagement and the milestones in infrastructural development to support the industry (VASEK, 2023). For example, the Kvarken Council leverages its website to create awareness of the different initiatives for advancing the industry, e.g., the report on the Nordic Battery Belt logistics highlights the critical mineral resources that serve as a precondition for battery production, it also highlights the strides in improving the transport connectivity in the region for more effective supply chain (Löfmarck et al., 2022). Taken together, the implication for ensuring massive awareness is because decarbonization involves different stakeholders, e.g., “civil society groups, the media, residents, political parties, advisory bodies, and government ministries” (Geels et al., 2017, 463) that could take more decarbonization and climate-related actions when they are well informed (Dickson, 2005).

Brand associations. Brand associations are third on the pyramid, and they entail “the knowledge and beliefs that a consumer holds

in memory about a brand, which thus creates a brand identity that shapes consumer perceptions” (Lerman et al., 2017, p. 4). Due to the strides recorded in the decarbonization of various well-established sectors, e.g., green mobility in the maritime (Sæther and Moe, 2021; Wasaline, 2022), aviation (Okonkwo, 2023) and the uptake of electric vehicles (Aasness and Odeck, 2015), the Nordic region overtime is associated as being at the fore of green transitions. Achieving brand association for the battery industry will be largely contingent on the actors’ agency, e.g., intentionality is needed to develop an ease of comprehending branding messages or easily identifiable logos or symbols for representing and marketing the NBB. Such an agency will increase the public’s associations with the emerging battery industry. Actors must instill the belief among stakeholders that the region is well-positioned to take on the mantle of battery production because it possesses favorable conditions, e.g., the availability of raw materials, strong institutional cooperation, and the fact that the region is strategically well-positioned, which enhances its supply chain and connectivity with European and international markets (EnergyVaasa, 2019; Löfmarck et al., 2022). Also, they need to emphasize the role of batteries in accelerating the decarbonization process by supporting green mobility across sectors. Any other factor that makes the region unique for the sustainable production of batteries and serves as a pull factor for attracting international talents must be well contextualized and promoted. For example, the “soft values, ability to move around regions with work and other activities can be highlighted” (Löfmarck et al., 2022, p. 69). For instance, Kokkola Material Week provides a platform for intellectual discussions on materials and technological innovation; the platform also highlights the regional capacity to pursue battery production (Materialweek, 2023). By strengthening the image of the region and the industry via such a platform, the business attraction in the region can be boosted (cf. Cleave et al., 2016).

Brand attitudes. The fourth stage is the brand attitude, which entails a “consumer’s net judgment about a brand” (Lerman et al., 2017, p. 5). Brand attitudes are formed after experiencing or using a product or service. As the production activities in the battery

industry begin in some regions, the expectations should be met, i.e., the “representations about the future and the possible socio-technical changes” (Sovacool et al., 2020, p. 18). The local communities should experience the promises in the branding message, e.g., increased employment creation and accelerated adoption of renewable energy. Against this backdrop, public expectation can influence the response and attitude of the decarbonization process (Van Lente, 2012). For example, reports suggest high enthusiasm among the stakeholders, e.g., in what they refer to as the ‘Northvolth effect’ where the local battery company, since its emergence, is increasingly expanding its employee base with 3000 workforce by 2025; also, the ancillary benefits that accrues is the growth of the region’s population with a projected 90,000 inhabitants by 2030 (Skellefteå, 2022). Brand attitudes can also be positively influenced when the potential challenges or factors that impact the public experience of the battery industry are effectively communicated. In that case, the expected benefits, potential, or actual challenges bedeviling the industry must be communicated honestly and transparently in the brand message, as highlighting this will increase public trust. For example, the envisaged connectivity issues that may cause delays in the products and services supply chain could be highlighted (cf. Löfmarck et al., 2022). Overall, branding the NBB should be convincing and devoid of whitewashing and greenwashing. The public must be encouraged to be involved, e.g., at the individual level, in shaping the attitudes of others against the backdrop that products and services can be promoted by word of mouth or recommendations by initial users or consumers (Lerman et al., 2017). That being the case, individuals can serve as battery ambassadors in promoting the industry (Ministry of Economic Affairs and Employment of Finland, 2021) and, as a default, informally share experiences with others, thus serving as brand ambassadors.

Relationships. Lastly, relationships are at the pinnacle of the pyramid and refer to “creating an enduring relation based on an emotional connection between the consumer and the brand” (Lerman et al. p. 5). It is evident that the European Union and the Nordic region aim to reduce dependency on the Asian battery market; this would require a steady and long-term public loyalty in patronizing batteries produced within the region and in the EU. To achieve this, the branding of the NBB must be continuous and dynamic in highlighting the region’s economic activities. A scrutiny of regional agencies, e.g., the City of Vaasa communications and marketing strategies, reveals that they, alongside other public and private institutions, are already promoting the regional potentials, e.g., energy clusters, renewable energy mix, investors, and transportation infrastructure (GigaaVaasa 2022; VASEK, 2023). The efforts must be strengthened and sustained because achieving an enduring relationship in the market, as stated, will require continually promoting the region and its economic activities. That being the case, every effort and initiative to ensure an enduring relationship between the industry and the stakeholders must be well communicated in the branding message. For example, some of the strides to be captured include but are not limited to well-established incentivizing measures (Zee et al., 2002), e.g., subsidies for companies operating in the region and possible tax waivers for those interested in investing in the industry, reduction in the value-added tax (VAT) for the public consumers that patronizes the battery industry, communicating about the accessibility and affordability of battery products and services when compared to competing markets, as well as information about market fluctuations. Disseminating this knowledge via branding will build a long-lasting relationship, stimulating an emotional perception of the industry because the public feels involved and well-engaged.

Discussion

The pyramidal tool kit is an *intentional* tool for enhancing the strategic actions of regional actors toward promoting the battery industry. The intentionality of developing the tool kit is contingent on the prevailing contextual conditions, i.e., the need to strengthen the implementation of the branding strategic action plan in the national battery strategies. The tool kit is intended to draw the attention of regional actors to the vital contextual factors to consider when developing the action plan within the Nordic region. For example, earlier studies suggest that despite the similar cultural background, branding that cuts across the different countries in the region could be challenging and, hence, requires intentional actions to navigate (Magnus, 2016). Such purposive action is shown in the recent report on the declaration of Nordic language policy (the Nordic Council and the Nordic Council of Ministers, 2024), highlighting the importance of language in improving linguistic ties and societal participation within the region. Likewise, actors within the battery industry must extend such intentionality in the language strategy to create a communication balance between the natives and foreigners towards reaching critical mass in gauging attention and stimulating awareness emanating from familiarity with the branding language and message. The tool kit is a timely and possible way to enhance actors’ agency, especially as the branding action plan is still being developed. It could serve as a guide in the region’s branding process towards achieving its decarbonization initiatives.

As shown in Table 1, the agency of regional actors as place-based leaders is *contextual*. It is exercised towards addressing the identified branding needs, e.g., increasing international visibility needs of the Finnish battery industry (Ministry of Economic Affairs and Employment of Finland, 2021, p. 24), enhancing the positive perception and marketing of the Norwegian and Swedish battery industry respectively (Regjeringen.no, 2022; Fossil Free Sweden, 2020). Hence, the explication of the pyramidal components viz-a-viz branding of the NBB could serve as a mechanism for contextualizing the essential branding actions that could enhance the branding process, such as a concise branding message and, more importantly, increased institutional involvement. Regarding the latter, one crucial point in contextualizing regional energy transition in which branding is subsumed is the complexity of the process, e.g., Coenen et al. (2021), Grillitsch and Sotara (2020) claim that energy transitions involve multiple actors with different access to power and resources. Similarly, the branding process also involves “interdependence of individual steps and stakeholders” at various levels (Margarisová and Vokáčová, 2016, p. 2059). For instance, the battery arena was recently established in Sweden to gather different actors towards the promotion and marketing of the region as a sustainability hub for battery enterprise, tackle competence challenges peculiar to the region, and propose other action plans to advance the industry (Swedish Energy Agency, 2024). It can, therefore, be deduced that contextualizing branding as part of a region’s energy transition efforts requires heterogeneous actors’ participation, and this is precisely the aspect that needs to be accelerated in the region.

The battery industry is new to the region; thus, actors’ *expectations* from the industry are high (Löfmarck 2022); actors from regional authorities and private companies have expressed their expectations for the future, e.g., they describe the industry as the new Nordic Silicon Valley, with multiplier effects, e.g., employment creation, new infrastructure, growth in real estate and population (Okonkwo, 2022). Likewise, the expectation for attracting more people to the region through effective marketing and regional branding is high (Kvarken.org, 2022d). Since the branding process is an emerging learning curve for actors,

adopting the pyramidal tool kit in implementing the branding action plan could boost actor's confidence, knowing that there is a low probability of oversight because the tool kit provides a synopsis of the crucial points to consider when developing the branding strategic action plan.

Finally, the tool kit provides a common reference point for actors to ensure a harmonized, simplified branding process and narratives, mainly because the diverse institutional actors involved in the branding process could lead to different discourses that may adversely affect the outcome. As the national strategies suggest (Fossil Free Sweden, 2020; Regjeringen.no, 2022), branding involves a collective effort of public and private actors. For example, at the individual level, community members could serve as ambassadors in promoting the region's battery clusters (Ministry of Economic Affairs and Employment of Finland, 2021) by raising awareness of the emerging green industries in the region. At the regional level, regional administration provides governance by investing resources in organizing events and discussions that promote energy transition initiatives (Kvarken.org, 2022c). At the cooperate level, energy companies operating in the region promote collaboration with other actors, such as the universities, in areas of knowledge co-creation to raise awareness of the battery industry in the region (Wärtsilä, 2021).

Conclusions

This paper develops a tool kit using the components of the brand pyramid (attention, awareness, associations, attitudes, and relationships) to enhance actors' agency in the branding action plan for the battery industry and the Nordic region. Also, it relies on multidisciplinary literature to develop the ICE conceptual framework, i.e., *intentionality, contextuality, and expectation* for discussing the importance of the tool kit in regional branding. As an intentional guide, the tool kit is designed to strengthen actors' agency in promoting the green industry emerging in the region. As a contextual tool, it responds to the need to increase the knowledge and visibility of the region and industry. The tool kit, therefore, enhances the clarity and conciseness of the brand message.

The tool kit presented in this study serves as a catalyst that could raise actors' curiosity towards reflecting and designing more tailored tool kits for advancing the branding action plan in the Nordic region. The national battery strategies suggest that the action plans are ongoing, and the goal is to realize the strategies' objectives in the short to medium term. Therefore, the ongoing phase of the strategy provides an opportunity for regional actors to leverage the ideas in the pyramidal tool kit. The author thinks that while the branding of the NBB is not entirely lacking, intensity and more targeted communication are needed to increase awareness. One way of achieving this is for more institutions and actors to come on board, i.e., to promote the region and the emerging industry. Indeed, different institutions could benefit from the tool kit, especially those whose prerogatives include promoting regional innovation, as it could serve as a reference point in the branding process. The Nordic region's Kvarken Council and Chamber of Commerce is a good case as they are "primarily saddled with advancing market cooperation and promotion" (Löfmarck et al., 2022, p. 53). Beyond promoting the NBB through institutions' websites, social media, and hosting events at educational institutions, corporate organizations, and cross-border discussions (ibid), the author thinks that actors' agency must continually leverage different avenues to positively and desirably contextualize brand identity of the region, e.g., in shaping the core associations, awareness, and attitudes of the industry among stakeholders. Considering this, more significant social events with the potential to reach a broader mass could also

be leveraged as they align with promoting the NBB brand as contained in the national strategies (Ministry of Economic Affairs and Employment 2021). For instance, the ice hockey competition is keenly followed in the region (Tjønndal et al., 2023).

Theoretically, the paper advances the innovative application of ideas from the branding literature towards developing a tool kit that enhances actors' agency in regional energy transitions. The tool kit is not final but can be subjected to further scrutiny and improvements to enhance its effectiveness and applicability. To achieve this would require engaging the institutions saddled with or interested in the branding aspect of the NBB to ascertain their opinions on the possible impact of the tool kit. By so doing, how relevant actors may perceive the tool kit, which is beyond the scope of this paper, could be ascertained. Therefore, future studies could deepen the understanding of the underexplored dimension by engaging actors in discussions to triangulate the ideas presented herein.

Data availability

All data used are included in the study.

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Author contributions

Prepared by only one author.

Competing interests

The author declares no competing interests.

Ethical approval

Human participants were not utilized in this study; hence, no ethical approval was needed by the author.

Informed consent

Informed consent was not required as the study did not involve human participants.

Additional information

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