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Abstract: Affordable housing is a key element of the European welfare state. Modern methods of construction (MMC) have re-emerged as a contemporary response, based on the expectation that industrial production can ensure low costs and adequate quality of housing. Yet several attempts to establish such production have failed. And this time around the demand for sustainability is added. This study therefore asks which complementary factors are required for these methods to deliver affordable housing in Europe scrutinizing the Swedish experiences. The argument is that beyond technology, processes, and products, additional elements such as raw materials, customers, finance, competencies, and a supportive production culture are essential. Institutional theory provides a framework, emphasizing that not only industries defined by firms, products, technologies and markets are needed, but broader industry exchange fields. The analysis shows that the Swedish modular housing sector exhibits key features of such a field: a focal population of firms and partners, a shared purpose, semi-permeable boundaries, and a relational structure with core and peripheral actors, multiple logics, and a partial collective identity. These features support some isomorphism and diffusion among participants and to new participants. Moreover, so far, the industry has been able to deliver acceptable levels of sustainability. Such institutional arrangements are difficult to replicate. While technologies can be transferred, establishing a functioning field requires wider interventions, including financial support and public regulation. The Swedish case further demonstrates that intervening in and changing market conditions demands strong and long-term efforts, including sustained demand from public, semi-public, and private actors.

Keywords: Affordability; Modular; Industrial; Housing**1 INTRODUCTION**

Modern Methods of Construction (MMC, Green 2022) have recently been pointed to by EU as a central solution to the lack of affordable housing in Europe (EU 2025a, b). Even if the EU (2025a, b) recommendation is of a “one of a kind” MMC, without any specification, and therefore of dubious value, the position taken here is that there are examples of MMC delivering affordable housing. And not only that but also deliver sustainable affordable housing. The interest is here to explore whether it is more than just MMC, that conditions delivery of affordable housing, the argument being that available technology, processes and products available will need much more, such as raw materials, customers, finance, competences and a particular production culture to mention a few. So, we are asking

What complementary factors is aiding MMC to deliver affordable housing to Europe?

Institutional theory offers an interpretative frame for understanding of such phenomena. It argues that “industry” is not merely as a formation of companies conditioned by common products, processes, technologies and market, but rather a field or more specifically an industry exchange field. Industry

exchange fields (IEF) are composed of structurally equivalent members that produce similar products/services, and their interaction partners (Zietsma et al 2017). In industry exchange fields, industry population members at a time strive for being distinctive yet also similar enough to be legitimate yet different enough to compete. The notion of “issue field” is moreover adopted to understand how sustainability and climate demands are incorporated into the field. The paper has a traditional structure. Following the problematization in the introduction the two following sections develop the theoretical and methodological design that can respond to the aim. Empirical material is provided, followed by analysis discussion and conclusion producing the answer to the aim.

2 THEORY

An institutional field represents an intermediate level between organization and society and is instrumental to processes by which socially constructed expectations and practices become disseminated and reproduced (Scott, 2014). A field is defined as a population of organizations that interact together “frequently and fatefully” (Scott, 2014). Institutional theory identifies different types of fields organized around different actors and entails different change dynamics in terms of how rising societal issues are incorporated into the existing institutions. Zietsma et al. (2017) distinguish between issue and exchange fields. Exchange fields are further divided in three types organized around populations of either industries, professions or social movements, and issue fields including competitive, interstitial and bridging issue fields. Industry exchange fields (IEF) contain similar members that produce comparable products/services, and their interaction partners (Zietsma et al 2017). In industry exchange fields, members strive for being distinctive in order to be competitive, yet also similar enough obtain legitimacy. Efforts to compete and struggles for market share and legitimacy in industry exchange fields can lead to innovation (Buchanan et al 2022, Zietsma et al 2017). However, the populations often do coordinated exchange among interaction partners, and collaborate to manage shared interests, such as lobbying or industry promotion, or to coordinate their interfaces with their common exchange partners by developing, for example, common technology or practice standards or coordinated labor relations (Anand and Jones 2008, Dahabiyeh and Constantinides 2022, Zietsma et al. 2017). Issue fields on the other hand are identified by the set of actors that interact and take one another into account on particular issues. Several studies have pointed to that formation of an issue field can lead to transformation of an industry exchange field. The purpose or focus of orchestration of issue fields is to negotiate, govern and/or compete over meanings and practices that affect multiple fields. Common for these fields is that they focus predominantly on a single population of organizations and on governance mechanisms or institutional infrastructure at an organizational population level (Hinings et al 2017). Even if the concept is related to that of “industry”, institutional field rather propose that industry dynamic not need to be defined by market criteria but can concern any kind of involvement in a particular issue or policy community (Zietsma et al 2017). The benefit of building on the concept of field is the possibility to incorporate field-level structures, participating organizations, and the actors working within and between these organizations (Zietsma et al 2017). The structures include collective interest organisations, regulators, informal governance bodies, field-configuring events, status differentiators, organisational templates, categories or labels, and norms (Hinings et al., 2017). These establish the boundaries of each community of organizations, defining its membership, the appropriate ways of behaving, and the appropriate relationships between organizational communities.

Zietsma et al. (2017) point to the following analytical characteristics:

- o Purpose/ focus of orchestration: Coordinating exchange with interaction partners; coordinating lobbying, industry promotion or standards development.
- o Boundaries: Boundaries tend to be relatively permeable to new entrants and based on practices.
- o Constituents: Focal industry population and its interaction partners.
- o Relational structure: Elite and core/periphery structure often exists, usually associated with market share.
- o Logics: Multiple, often segmented logic permutations.
- o Identity: A mutual awareness among participants that they are involved in a common enterprise, implying shared identity. Scott (2014) adds the extent of agreement on institutional logics, that prescribe behavior within fields. Variations do exist however based on competitive positioning.

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- o Implications for isomorphism and diffusion: Isomorphic pressures are moderate and come primarily from exchange partners. Innovations occur frequently and diffuse rapidly.

3 METHOD

The primary research question requires a methodological approach capable of examining both the development of an industrial sector and its pathways toward sustainability transitions (Köhler et al., 2019; Köhler et al., 2020). Several theoretical frameworks were initially considered, including the concept of the industry exchange field (Zietsma & Groenewegen, 2017), multilevel perspective (Köhler et al. 2019), technological innovation systems (TIS; Carlsson & Stankiewicz, 1991), the Triple Helix model (Etzkowitz & Leydesdorff, 1995), and Porter's five forces analysis (Porter, 1985). Ultimately, the industry exchange field (IEF) framework was selected due to its strong alignment with the research objectives. While the Triple Helix and TIS perspectives provide valuable insights into knowledge creation and diffusion, they are comparatively loosely defined for the purposes of this study. In contrast, Porter's framework is considered overly focused on commercial competition, and the multilevel perspective on sustainability transitions (Köhler et al., 2019) places greater emphasis on niche actors and entrepreneurship than is appropriate here, where established incumbent actors are of primary importance. In this study, the modular timber housing manufacturing sector is conceptualized as an Industry Exchange Field, following the framework proposed by Zietsma et al. (2017). Within this field, key actors, networks, and institutional structures were systematically identified. The empirical scope includes 20 manufacturers of varying size. These were chosen in a snowballing fashion over a long period of time and more in-depth from 2021. Among these, five larger firms—Boklok, Lindbäcks, Derome, Moelven, and VIDA bygg—were examined in greater detail. The networks analyzed comprise Lean Construction Sweden, which promotes industrialized construction practices aligned with modular production; the Swedish federation for woodworking and furniture industries (TMF); and customer networks linked to machinery suppliers such as Weinmann/HOMAG and Randek. Institutional actors include Public Housing Sweden (Allmännyttan), the GS trade union for forestry, wood, and graphic industries (GS Facket), TMF, and the Swedish Ministry of Housing. Notably, the Ministry implemented a significant regulatory development—the climate declaration—effective from January 1, 2022. Although all 20 companies in the sample were reviewed multiple times during the period 2021–2025, and two smaller firms were investigated in more depth, the present analysis focuses primarily on four of the largest manufacturers: Derome, Boklok, Moelven, and Lindbäcks. These firms are identified as dominant actors within the Swedish Industry Exchange Field due to their scale, capabilities, and influence, as elaborated in the empirical section. A fifth company, VIDA Bygg, was also considered due to its ownership by the large Canadian corporation Canfor, which reported a global turnover of €5.1 billion in 2022. However, Canfor's modular housing activities in Sweden remain limited, with reported turnovers of €10.1 million in 2022 and €5.6 million in 2024, alongside a deficit of €3.1 million, reducing its relevance for the present analysis. The empirical material is based on an extensive desk study carried out in multiple iterations. The data collection strategy included company annual reports, sustainability reports, official webpages, multimedia materials (e.g., YouTube videos and podcasts), and academic student work such as master's theses, see table 2. From these sources, key performance indicators and organizational characteristics were extracted, including turnover, number of employees, ownership structures, management configurations, production facilities, machinery suppliers, and product portfolios. In addition to the desk-based analysis, six semi-structured interviews were conducted. These included one representative from an industrial modular timber housing manufacturer and two representatives from labor market organizations. The interview with the company representative was complemented by an on-site factory visit, allowing for direct observation of production processes.

Table 1: Data sources

Data type	Number	Comments
Annual reports	122	Module company and owners corporations Covering between one and ten years
Sustainability reports	35	
Other documents	455	
Factory visit	1	
Youtube videos	12	Mostly shop floor and building site
Interview	6	Expert observers and practitioners

Out of this material, 283 documents and 69 annual reports concern the four selected companies. The collected data were analyzed using an abductive approach (Tavory & Timmermans, 2014), involving iterative engagement between empirical observations and theoretical development. This process included revisiting earlier materials and reinterpreting them through an expanded Industry Exchange Field framework tailored to this study, while also incorporating a longer-term developmental perspective. The coding used the concepts of IEF: Purpose, boundaries, constituents, relational structure, logics, identity and possible isomorphism. The 2025 update of the analysis specifically considered the ongoing housing crisis in Sweden and its implications for industry dynamics.

A limitation of the study is its primary focus on the Swedish context. Comparable industries in other countries were not systematically examined, although foreign-owned firms operating within Sweden—such as Moelven and VIDA bygg—were included. Furthermore, while a considerable body of international research on industrialized housing exists, it has not been comprehensively integrated. Many of these studies tend to adopt a construction management perspective centered on production processes, which is considered less relevant to the broader industry and institutional focus of this research. Microsoft Copilot (Microsoft, 2025) was used to support language refinement in selected sections of the paper. Additionally, source material available in Swedish and Danish has informed the analysis but is not explicitly referenced.

4 INDUSTRY AND MMC

The Swedish modular wooden housing industry belongs to the broader Swedish wood-processing sector. Around 70% of Sweden's land area is forested, and the national forest sector ranks as the third-largest exporter of timber, following Canada and Russia (SCB 2026).

This sector has seen considerable development over time. By 2020, it reached a 20% share of the construction market, with more than 100 producers involved (Steinhardt et al. 2020). In the following years, this share decreased to 17% (TMF 2026). Between 1994 and 2015, about 11,000 apartments were built across roughly 190 projects involving multi-storey wooden buildings in Sweden, with an estimated value of €370 million. This took place in a country with a population of around 10 million. In comparison, neighboring Denmark saw at most 1,000 apartments constructed during the same period, typically in buildings no taller than two storeys.

From 2015 to 2020, there was strong growth, particularly in apartment construction using wood. The period from 2021 to 2025, however, has been marked by a housing crisis in Sweden. The sector includes a small group of large firms (see Table 1) alongside many smaller companies, with production largely based on manual labor. The year 2018 represented a peak in activity for both the national construction sector and the timber-based modular building segment. This was followed by several major investments: Lindbäcks opened a factory in 2017, followed by Setra, Södra, and BoKlok in later years. BoKlok's

upgraded factory was opened in February 2023, shortly before the housing crisis began. This crisis resulted in workforce reductions across the four focal firms, as well as bankruptcy among three additional companies. It also led to shifts in ownership structures across the sector.

4.1 MMC in Swedish Industry

The MMC technologies in the Swedish industry is at once varied and homogenous. The many small manufacturers would often feature a main production line of table type, where most of the process would be carried out with hand tools. One finds similar production lines in the larger factories which is then equipped with industrial technologies, mostly semi automatic, where a machine is carrying out a process under surveillance of one or two operators. The main production lines in the large factories would be the wall line, the floor line, the ceiling line, and the modular line (Assembly 2025, See table 2 below).

Table 2: Wall Line*

Station	Function	Comment
1	Material storage for top- and bottom plates	Handling, transport machines (rolling band)
2	Automatic stud storage and feeding system	Handling machine large board, 5 substations
3	Vapor barrier and noggins, Sheet layer 1	
4	Nailing 1, Sheet Layer 2	nail machine with 4 tools, wall size
5	Processing Station	Painting machine
6	Nailing 2, Butterfly 1	Nailing machine 4 tools wall size
7	Butterfly 2	Handling machine to lower the wall to horizontal position
8	Installation and insulation	Delivery table wall size waggon on rails manually operated
9	Exterior sheet layer	handling equipment suction cops Nail machine 4 tools (façade elements)
10	Nailing exterior sheet	wall size rolling band
11	Batt and cladding	and handling raising
12	Upraiser	wall element vertical Handling vertical position wall elements
13	Delivery trolley	manually monitored Factory length lane
14	Automatic delivery to wall buffer	

*Source Assembly (2025) simplified

Dominant equipment suppliers are Randek, and Homag. The lines would be connected via buffer storage. There are also a few examples of handling done by industrial robots, but much is done by overhead cranes, butterflies and via tracks in the floor. On the digital side there is integration between design and production but to a varying degree. Systems include hsbcad, Monitor ERP, and Vertex. The digitalization support flexibility in product design and production increasingly well.

4.2 The products

The MMC products in the Swedish modular house building industry is similar to the production technologies at a time varied and homogenous. The many small manufacturers would of feature strong customer specific deliveries, often based on a limited product program. The same counts for some of larger players, but others pursue a rigorous mass customization approach.

It is common that the design of modules is prepared for truck transport, setting length, width and height to specific sizes. It is common that a company operated one or two factories and is attempting to sell from them across the entire Sweden, a scope of, in principle 1850 kilometers. Most of the building activity is Sweden is however concentrated in the large south limiting the operating scope to 750 km.

4.3 The four major companies doing MMC

Derome

Founded in 1946 in Halland (Southern Sweden) – Derome was initially a sawmill. In 2017, the company employed 1,750 employees and had a turnover of around 597 million €. In the financial year 2022, the group had a turnover of 1.1 billion € and had 2,700 employees. This represents significant growth, secured, among other things, through acquisitions and expansion within the trade in building materials and machinery rental. The Derome group is family-owned and is currently run by the second and third generation with many business areas, including extensive exports of timber and other processed wood products and prefabricated villas. The most important business areas are Derome Timber, Derome Træteknik, Derome Bygge & Industri and Derome Hus. Derome Hus' business concerns the production of homes, which are sold and marketed under four brands; A-hus, Varbergshus, Derome Bostad and Derome Plusshus. The house production has two main business areas, villa production (including plan elements) and apartment buildings (modular construction). Derome Husproduktion experienced significant growth from 58 million € in 2019 to 217 million € in 2022. The deficit grew in the same period to 26.9 million € in 2022.

Moelven

Moelven Industrier is a Norwegian-owned group that includes 53 companies, of which 21 are located in Sweden. The group had a turnover of 1.3 billion € in 2022. There is a total of 3,300 employees in the entire group. Moelven's activities include sawmills and the production of glulam, which is used in modular systems. Moelven Byggmodul AB consists of four factories that the Moelven group acquired in the early 2000s: Sandsjöfors, Torsby, Kil and Säffle/Värmlandsbro (building modules) - each of which has a certain specialization. In 2022, the total annual production in Moelven Byggmodul was approximately 6,000 modules, which is roughly on par with previous years. Moelven's new in-house production also includes a contracting company for completing the buildings on the construction site. In Moelven Byggmodul AB, turnover grew significantly from 2019 to 2022; from 101 million € to 156 million €. The profit was stably low during the same period. There were approximately 500 employees until September 2023, but due to failing orders there were layoffs. At the beginning of 2024 there are around 400 employees (Moelven 2026).

Lindbäcks

Lindbäcks originated from a sawmill in northern Sweden where production is still located. The headquarters are today in Piteå. The company is family-owned – now with the fourth generation in management. The company has been working closely with Luleå University for a number of years after

adopting LEAN principles (Kifokeris 2021) and it has two main business units: Lindbäcks Bygg AB (project developer, producer and installer of modular wooden apartment buildings) and Lindbäcks Fastigheter AB (manages approximately 500 apartments in Norrbotten). The distribution of employees gives an idea of the emphasis. In 2020, Lindbäck states that there were 545 employees divided between white-collar workers (187), factory workers (242) and construction workers (116). Two years later, the number of employees in production has been reduced sharply to 98, which is due to the closure of one of Lindbäck's factories. The company does not offer standard products but adapts each project to the customer and markets itself on targeted design adapted to a given location. The company's revenue was stable at approximately 156 million € from 2019-2022. Throughout this period, there were also losses.

BoKlok

BoKlok is, with 15,000 apartments produced over 25 years, the largest Swedish manufacturer of apartment buildings based on wooden modules. BoKlok's basic concept is a combination of industrial production and optimization of area in apartments in two-story buildings. The concept was developed in a collaboration between IKEA and Skanska between 1994-1997. From 2012, the company switched to producing up to four floors in the "Flex" product concept with more focus on entire neighborhoods. To achieve efficiency and affordability, BoKlok focuses on a few predetermined variants and tries to avoid adapting to customer wishes. These are available in hundreds around Sweden. The homes are easily recognizable by their outdoor access balconies. BoKlok often worked together with Skanska project development and establishes "bostadsrättsföreningar" (ownership form that is somewhere between cooperative housing and condominiums). The companies BoKlok Housing AB and BoKlok Byggsystem AB were both owned and operated by Skanska as subsidiaries until 2024. Revenue in 2019-2022 was stable at around 33 million €. The company experienced several large losses in 2022 and 2023 (Skanska 2025b). Annual production 2021 and 2022, approximately 1000 apartments (Skanska 2025b). Skanska sold the company to Surewood in 2025 (Skanska 2025a). Surewood merged the company with other module producers and reduced staff significantly.

5 ANALYSIS

5.1 The MMC characteristics

The MMC technologies, production lines and product in the Swedish modular house building industry is at a time varied and homogenous. In this manner they contribute to a stabilization of the IEF. Companies can look over each others' shoulders, and a certain amount of isomorphism will occur. It should also be noted that the manufacturers of production technologies including Randek and Homag operate globally. The systems sold to Swedish companies in woodworking are broadly the same as elsewhere in Europe.

5.2 The IEF characteristics

Purpose/ focus of orchestration

Coordinating exchange with interaction partners; coordinating lobbying, industry promotion or standards development. Overall, the companies in the field mostly compete for selling their -rather similar- products. The labour market association, they are members of, TMF, are responsible for joint labour contracts, through collaborating with the GS union. Several attempts to export the modular products, both through knowledge transfer and direct entry into foreign markets were made, with and without state support.

Boundaries

Boundaries tend to be relatively permeable to new entrants and based on practices. The boundaries around the IEF are indeed relatively permeable. New companies doing manufacturing enter from other parts of the woodworking industry or from abroad. A background from other parts of woodworking imply practice

experience with for example machines in the production lines needed for making modular products. The production technology used in this field is broadly the same as elsewhere in wood working. Second the frequent use of open tendered competition for contracts at least appears open for entry. The framework purchasing agreements made by large social housing customers allowed foreign producers from Poland and Estonia to strengthen their position. Finally foreign acquisition of existing companies in Sweden enables the entry. This has occurred recently from Canada (Canfor buying VIDA bygg) and Norway (Moelven, OBOS). The barriers for entry are foremost networks with customers, customer associations, financial players and local workforce.

Constituents

The focal industry population probably consist of four large players Derome, Boklok/Surewood, Lindbäcks and Moelven. The industry is organized in TMF, the association of wood and furniture manufacturers. Here the many small manufacturers join forces. There is a widespread practice among the small players to organize their buyers themselves through establishing owners' right associations (bostadsrättsföreningar) for buying housing complexes, often single-family villas or rowhouses, thus reducing then potential power of the buyer and enabling diffusion of standard products with customer influence. The most important interaction partners for the large companies are the large institutional customers private and semiprivate housing companies. Three important of those semi-private public housing customers organized long-term volume purchases through a frame agreement. This has occurred in 2010, and again in 2021. the national public housing association ("Svensk Allmännytta") and the association of municipalities and regions (SKR) made a large deal with standard purchasing through a frame contract running for 10 years. Second another frame contract was made by the national public housing association 2021-2026 for multistory apartment building (25000 apartment purchase guaranteed) and SKR made in 2021 new agreement on single family housing. These agreements not only bargained fixed prices, but also transparency in terms of sustainability and energy performance. The level of CO2 emissions and the manner in which it was measured and documented was a copy of the contemporary Swedish National Legislation.

Relational Structure

As hinted above, analysing the constituents, there are signs of an elite and core/periphery structure where a few large players dominate. Something also reflected in contacts with government. For long Boklok, the Skanska/IKEA alliance, could be seen as leading in the field. The later years crisis has however changed that.

Logics

Multiple, often segmented logic permutations. The companies in the field compete quite actively and a least a good part of sold products are purchased by customers through public tenders. Thus, the IEF features a dominance of the market logics, but coexisting with public regulation and public purchasing (Viking & Lidelöw 2015). There is surprisingly little presence of climate mitigation logics. Customer demands and public regulation push in that direction, but facts about emission of the products is rarely shared. This is a bit surprising as modular housing are relatively standardized products, with predictable climate properties. Moreover "climate" can be understood as an upcoming issue field, that create tensions with the existing IEF and might change the constellation of logics for the future. Finally, some of the locations of the factories exhibits a remnant community logic, referring to the mill society locale around the factories ("Bruksorter" in Swedish, Pugh et al 2024). This community logic by contemporary times corroborates a collaborative and loyal culture between owners, managers and employees (see also Barnett and Lueck 2020).

Identity

The extent of agreement on institutional logics is overall very limited and fragmented. A huge variation across companies exists due to competitive positioning. A much weaker common identity refers to the country, which on the other hand is mobilized when the IEF members or representatives promotes themselves abroad.

Isomorphic Implications

The implication for Isomorphism and possible diffusion is mixed. Some elements across the companies are quite similar, ie their use of MMC. But isomorphic pressures are moderate, due to a imperfect market and to limited purchasing power from exchange client partners.

Overall, as expected, the industry shows resonance with the Industry Exchange Field concepts of purpose, boundaries, constituents, relational structure, logics, identity and possible isomorphism. But also, a few examples of internal tensions and contradictions, such as between large constituent (dominant) companies versus joint labour contracts, something also echoing the notion of coopetition, coexistence of cooperation and competition (Brandenburger and Nalebuff 1996).

6 DISCUSSION

While the industry under study thus largely matches the notions of an industry exchange field, at least one factor is disturbing. One might have thought that large corporations with an industrial timber manufacturing division would protect such a division against the large fluctuations in the market, with reference to the large capital investment involved and a long-term business perspective. But the common picture is that of reducing activity and even dismissing employees in an effort to trim the costs. This is a common industry management act, and just underline the competing logics feature a dominance of economic rationality. It is thus apparent that even if institutional theory, including “industry exchange field” concepts offer alternative explanation to those of market, that here market economy dynamics do appear to prevail in the industry’s decline. One factor that undermine a field argument specific for the Swedish modular timber housing industry are the production technology similarities to the rest of Europe. We saw how the production technology might be broadly comparable across Europe, amongst other explanatory factors the international coverage of the technology producer. Yet on the other hand product features were less obvious. It is probable that Swedish housing standard would need considerable appropriation to comply to other nations and regions. One aspect of this is the costs. It might be needed to realize cost reduction by doing reverse innovation (von Zedtwitz et al 2015), stripping the Swedish modules from certain equipment and functions as well as reconfiguring the supply of material to local availabilities.

7 CONCLUSION

This contribution set out asking what complementary factors is aiding Modern Methods of Construction to deliver affordable housing to Europe? It was explored whether an institutional approach to MMC would aid in understanding MMC and what conditions delivery of affordable housing, the argument being that technology, processes and products available will need much more such as raw materials, customers, finance, competences and a particular production culture. Institutional theory offers an interpretative frame of understanding of such phenomena. The understanding is that it is not industry as a formation of companies conditioned by common products, processes, technologies, and market, but rather a field or more specifically an industry exchange field. Through the analysis it was found that the Swedish industrial modular housebuilding industry did feature a number of the characteristics of and industry exchange field: A focal industry population and its interaction partners. A requisite purpose/ focus of orchestration and sufficient, yet partly permeable boundaries. Moreover, a relational structure featuring some elite and core/periphery structure, multiple logics, difficult to convene, in play and some joint identity. Leading to some isomorphism and diffusion amongst players. The emergence of the issue field of “climate” means a common quantification of emission factors and exercising legal compliance. This compliance is more of a process than a single event. But so far, the industry has been able to follow suit and deliver acceptable levels of sustainability. And a few players go further and introduce circularity, biodiversity and planetary boundaries. Such institutions are difficult to copy. While technologies may be transferable, the field transfer requires a much broader set of tools. Financial aid, public regulation and purchasing are three needed tools. The industrial relations and production culture are two of the more difficult ones. The Swedish industry experience also reveals nevertheless, that modifying market factors will require quite forceful and long-term

interventions, including continual flow of demand from customers, public, semi-public and private. Thus, growing modern methods into an industry requires a lot more than mastering technology on the shop floor.

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