BEYOND THE SECTOR: VALUE CHAIN ANALYSIS AS A TOOL FOR UNDERSTANDING (AND ACTIVATING) A TERRITORY'S ECONOMY

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Territorial economic analysis has long been trapped in an operational paradox. The most accessible tools — sector classifications, statistical databases, company registers — offer a reasonably accurate picture of how many firms exist, what areas they operate in, and how much employment they generate. But that picture, useful as it is for description, falls short when it comes to guiding decisions. It says nothing about how firms relate to one another, where value is actually created, which dependencies make an ecosystem fragile, or which capabilities determine its real competitive position.

Value chain analysis does not solve this problem by adding more data. It solves it by changing the question. Instead of asking 'what firms are there and which sector do they operate in?', it asks: 'what function does each firm perform in the process of creating value, for whom, with what capabilities, and from what competitive position?' A seemingly small shift — with far-reaching methodological and practical consequences.

The limits of sectoral analysis

Sectoral analysis has long been the dominant way of understanding a territory's economy, and not without good reason. It is compatible with available statistical sources, enables comparisons between territories, and makes communication to non-specialist audiences straightforward. But it groups very different activities under the same heading, concealing critical differences in terms of value generated, technological complexity, and exposure to global competition. A firm manufacturing standard components in long production runs and another developing high-engineering integration systems for the same client may share an industry code and yet occupy incomparable strategic positions.

More importantly, sectoral analysis does not capture relationships. It ignores who supplies whom, who organises the supply chain, who introduces innovation into the system and who simply absorbs it. It cannot reveal what proportion of procurement leaves the territory — and with it, what fraction of the value generated — nor detect the gaps that create structural dependencies that are hard to address in the short term. At a time when global value chains are being reconfigured for geopolitical, technological, and ecological reasons, those blind spots are costly.

From links to interdependencies

Value chain analysis organises the productive cycle around its main functions: procurement of materials, components, and energy; manufacturing and productive processes; systems transformation and integration; logistics and distribution; market access; and, cutting across all of these, advanced knowledge services — engineering, R&D, digitalisation, certification — that enable and qualify the whole. Each function has a different profile in terms of added value, barriers to entry, and required capabilities.

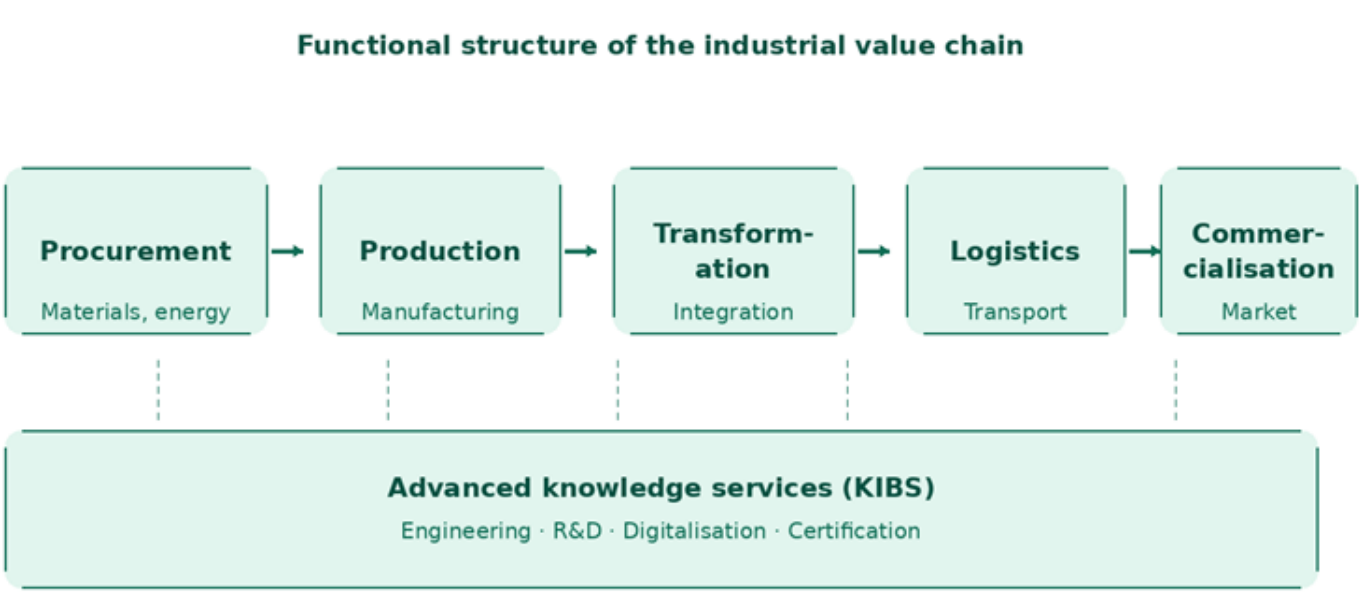

Figure 1. Functional structure of the industrial value chain

The chain map is a starting point, not an end result. What matters is not knowing how many firms occupy each function, but understanding the interdependencies: what proportion of procurement is done locally or depends on external suppliers, how technical information flows between different actors, who holds prescriptive power over the rest of the chain, and at which points the territory is structurally dependent on the outside. It is these interdependencies that determine the ecosystem's resilience and guide industrial policy decisions.

Where value is retained

Not all positions in the chain are equally valuable. The model known as the Smile Curve — originally developed to describe the Asian electronics industry and since extended to virtually any manufacturing sector integrated into global chains — offers a useful representation of how added value is distributed across a product's life cycle.
The image is that of a U-shaped curve. Pre-production activities — R&D, product design, systems engineering, intellectual property development — and post-production activities — commercialisation, branding, servitisation, advanced maintenance solutions — concentrate the highest margins and the greatest scope for competitive differentiation. The central manufacturing and assembly phases, except in segments of very high precision or technological complexity, face growing pressure on costs and margins, partly as a consequence of globalisation and partly through the advance of automation.

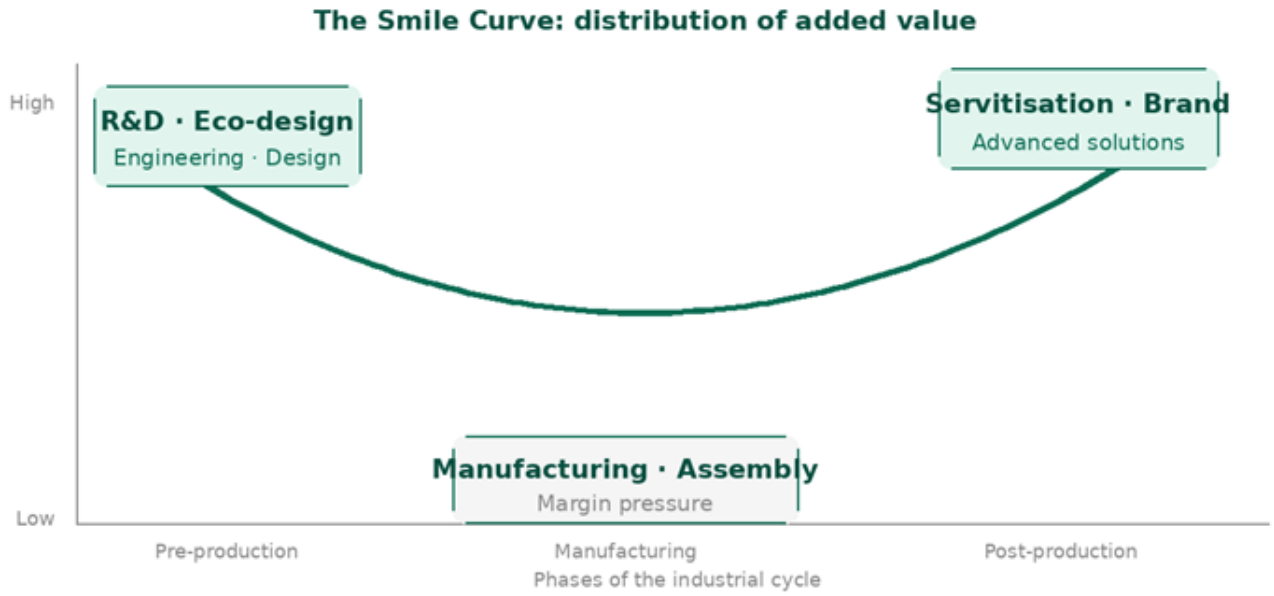

Figure 2. The Smile Curve: distribution of added value across the industrial cycle

The implication for industrial policy is direct and rather uncomfortable. A territory that has built its specialisation in the central manufacturing phases without simultaneously developing capabilities at the ends of the curve is in a structurally vulnerable position — and will increasingly be so. The answer is not to abandon manufacturing, which remains the ecosystem's anchor and the source of its accumulated tacit knowledge. It is to promote a progressive shift towards higher-value activities: advanced engineering services, integrated solution development, servitisation capabilities. A shift that does not happen spontaneously, and that requires both corporate decisions and favourable conditions in the surrounding environment.

The quality of specialisation

Turnover volume or employment generated are necessary indicators, but insufficient for assessing an industrial ecosystem's potential. Two territories with similarly sized productive structures can have radically different competitive positions depending on the technological complexity of their activities and their knowledge intensity.

Productive complexity captures the degree of technical sophistication of what is produced: whether the activities present involve product engineering, complex systems integration, or management of tight tolerances — or whether, by contrast, they consist of standardised processes with few barriers to entry. ***Knowledge intensity*** reflects the extent to which activities depend on specialist talent, systematic investment in R&D, digitalisation of processes and products, and compliance with demanding standards. High-complexity, high-knowledge-intensity activities are not immune to global competition, but they generate stronger barriers to entry and retain more value in the territory that produces them.

Combining these two variables with the functional chain map allows a more precise picture of the ecosystem's real position to be built — identifying structural strengths, vulnerabilities, and the direction in which growth makes most sense — than any sectoral aggregate can offer.

Who really organises the chain

In today's paradigm, a territory's competitiveness depends not only on the sum of its individual firms' capabilities, but on how those firms articulate together. Identifying the nodes that structure that system is one of the most critical — and least visible — tasks of the analysis.

Lead firms or integrators are not necessarily the largest or best-known. They are the ones that define technical and quality standards for their entire supply chain, organise and develop their local suppliers, and act as connection points to global markets or international value chains. Their presence in a territory pulls the whole ecosystem along: they demand capabilities from their suppliers, generate demand for advanced services, and transfer tacit knowledge through a relationship that goes far beyond the commercial transaction.

Strategic suppliers are those whose absence or loss would put the continuity of their clients' productive process at risk. They provide high-criticality solutions with their own design and engineering capability, which gives them a position of interdependence — not mere subordination — in the chain.

Specialised innovative SMEs — the so-called hidden champions — are leaders in very specific technology niches whose technical singularity, accumulated through years of focused investment, makes them practically irreplaceable. They are often a territory's most valuable and least recognised assets.

Critical ancillary services — testing and certification laboratories, specialist logistics operators, KIBS providers, advanced technical training centres — are the ones that reduce friction in the system and make it possible for the whole to function efficiently. Their presence rarely appears in industrial competitiveness diagnostics. But their absence is felt.

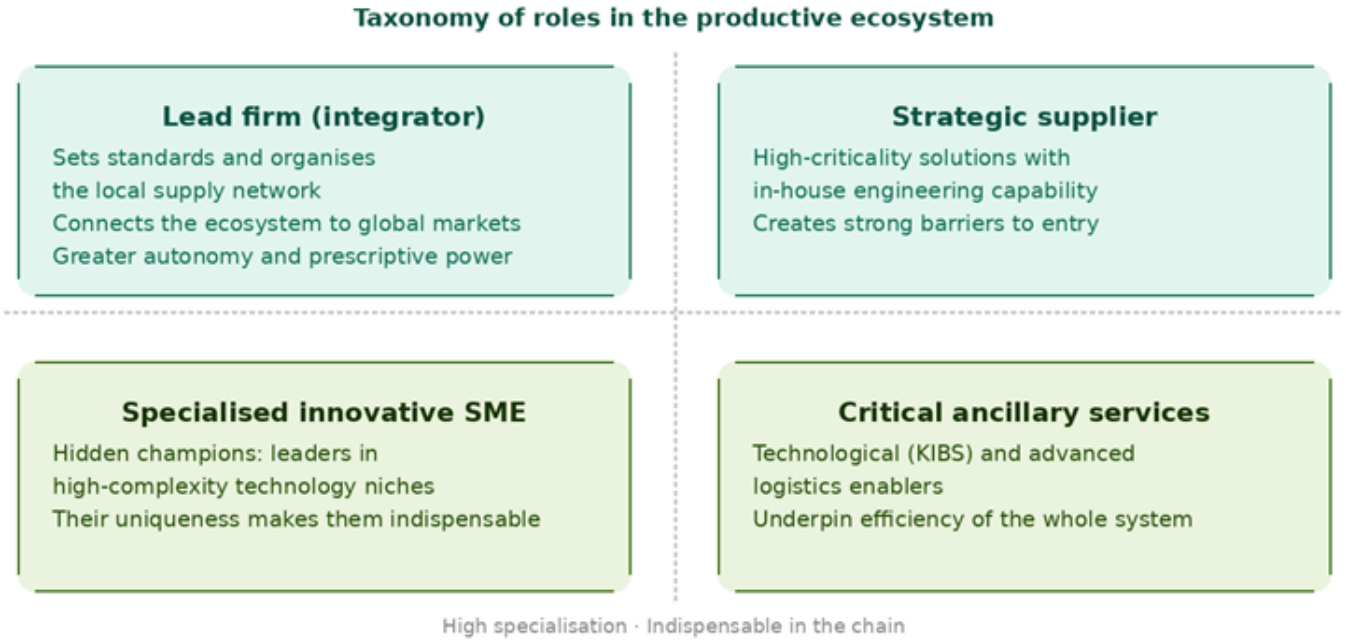

Figure 3. Taxonomy of roles in the productive ecosystem

This taxonomy has immediate practical consequences. Identifying the real nodes — the firms that actually organise supply and transfer knowledge, regardless of size or visibility — typically reorients intervention priorities entirely compared to what a sectoral reading would have suggested.

The methodology: from databases to fieldwork

The analysis process combines quantitative rigour with qualitative contrast across five phases.

1. The first builds the **business base**: identifying the universe of relevant firms, defining the chain functions pertinent to the territory, and designing the functional classification system.

2. The second develops the **structural diagnosis**: classifying firms by function, analysing their distribution by added value and complexity, and identifying gaps and dependencies.

3. The third identifies ***critical nodes*** by applying the agent taxonomy.

4. The fourth phase — **fieldwork and qualitative analysis** — is the most time-intensive and also the most irreplaceable. In-depth interviews with a representative sample of ecosystem firms capture information that exists in no database: the strategic outlook of managers, the dependencies they consider critical, the opportunities they can see but cannot exploit alone, the bottlenecks holding back their development. Without this contrast, the quantitative diagnosis risks being technically rigorous and strategically beside the point.

5. The fifth phase is activation and synthesis: **translating the diagnosis into collaboration networks** with a concrete agenda, and producing outputs — maps, reports, dashboards — usable both for guiding public policy and informing business decisions.

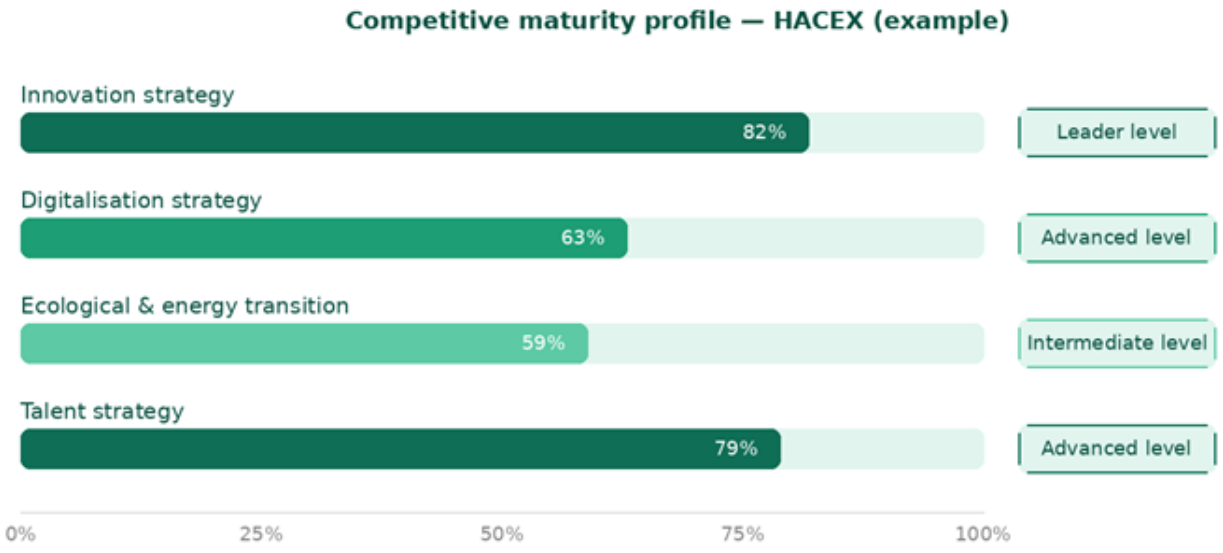

Figure 4. Competitive maturity profile — HACEX example output

The individual result is a profile that positions each firm in relation to its sectoral environment. But the most important value lies in aggregation: the combined ecosystem profile makes it possible to identify with precision which needs are shared across the productive fabric, and therefore which are the most solid axes on which to build collaboration networks.

The network as destination, not as outcome

A value chain diagnosis only makes sense if it leads to action. **And the most relevant form of**

collective action in this context is the creation of a *business network*: a collaboration space structured around shared challenges and genuine complementarities, not geographical proximity or sectoral affinity.

For a network to function and endure, it needs a genuine reason to exist — real interdependencies among its members — a composition combining different profiles with complementary roles, leadership recognised by all even if not the largest actor, and an agenda that mixes short-term results — the kind that build trust — with longer-term lines of work. It also needs to be connected to the institutional ecosystem surrounding it: technology centres, vocational training, public funding schemes. It is the articulation of all those elements — not the abstract will to collaborate — that determines whether a network thrives or dissolves.

What the analysis makes possible

Understood in this way, **value chain methodology does not produce a diagnosis. It produces a knowledge infrastructure** for the territory that, updated systematically, enables decisions that would otherwise not be possible. It allows training investments to be directed towards the capabilities the chain actually demands. It allows related diversification opportunities to be identified before they materialise in the market. It allows critical dependencies — in raw materials, technology, talent — to be detected before they become vulnerabilities. And it allows the attraction of activities that fill the ecosystem's gaps to be prioritised with criteria, rather than reactively.

At a moment when reindustrialisation is back on the European political agenda, and when the ecological and digital transition is forcing a rethink of the productive base of many territories, that analytical capability is not a methodological add-on. It is, in all likelihood, the precondition for industrial policy decisions to have any chance of getting it right.

Illustration: Google DeepMind