

# Alignment and agility: new dimensions for valuing and managing the intangible value of organisations

## Summary:

In the search for a global understanding of company valuation, we see a complex field of study, historically under the sway of an allegiance to neo-liberal finance. In the context of an economy that is evaporating into the immensity of the immaterial, the latter seems helpless in the face of the astronomical sums involved in mergers and acquisitions. The result is a crisis of model: more than half of these operations end in failure, resulting in monetary destruction and considerable social damage.

Given this pitfall, the growing importance of goodwill - the black box of modern accounting - is cause for concern. It raises the need to decipher the gulf between book value and market value, a key factor in enabling investors to make informed decisions.

The economic world, aware of the crucial contribution of intangible assets to wealth creation, is finally seeing managers wake up to this reality, albeit reluctantly and only recently. The emerging methodologies, however useful, are incomplete and unclear. They are in urgent need of revision, to incorporate the societal changes that have reshaped our lives over the last decade.

In response, we need to develop a new approach - an open method - that takes into account the imperative of aligning Strategy, Profitability and Sustainability. A method which highlights the issues of Risk and Agility and which, transcending simple valuation, positions itself as an essential management tool.

Key words: valuation, agility, alignment, goodwill, intangible assets.

## Résumé :

Dans la recherche d'une compréhension globale de l'évaluation des entreprises, on observe un champ d'étude complexe, historiquement sous l'emprise d'une allégeance à la finance néolibérale. Dans le contexte d'une économie qui s'évapore dans l'immensité de l'immatériel, cette dernière semble impuissante face aux montants astronomiques des fusions et acquisitions. Il en résulte une crise de modèle : plus de la moitié de ces opérations se soldent par un échec, entraînant des destructions monétaires et des dégâts sociaux considérables.

Dans ce contexte, l'importance croissante du "goodwill" - cette boîte noire de la comptabilité moderne - pose question. Elle soulève la nécessité de décrypter l'écart entre la valeur comptable et la valeur de marché, facteur clé pour permettre aux investisseurs de prendre des décisions en toute connaissance de cause.

Le monde économique, conscient de la contribution cruciale des actifs incorporels à la création de richesse, voit enfin les managers s'éveiller à cette réalité, même si c'est à contrecœur et depuis peu. Les méthodologies émergentes, aussi utiles soient-elles, sont incomplètes et peu claires. Elles doivent être révisées de toute urgence afin d'intégrer les changements sociétaux qui ont remodelé nos vies au cours de la dernière décennie.

En réponse, nous devons développer une nouvelle approche - une méthode ouverte - qui prenne en compte l'impératif d'aligner la stratégie, la rentabilité et la durabilité. Une méthode qui mette en évidence les questions de risque et d'agilité et qui, au-delà de la simple évaluation, se positionne comme un outil de gestion essentiel.

Mots clés : évaluation, agilité, alignement, goodwill, actifs incorporels.

## Introduction

In an attempt to grasp the complexity of business valuation, this article puts forward a normative proposal in response to a perceived practical void. In practice, the construction of valuation tools is emerging, particularly in the academic world, underlining the need to decipher goodwill, the role of which is constantly increasing. We put forward keys to understanding that closely

link finance, profitability and sustainability - a fusion that forges an innovative perspective. We also suggest management tools for profiling this alignment.

Our approach is deliberately normative, reflecting the very theme of our research. It bypasses the prolix debate between 'positive science' and 'normative science' and focuses on practical involvement in 'management sciences'. The latter, according to Dumez, are defined by a marked interest in organisational devices, arrangements and arrangements targeting the coordination of action towards a result - with performance as a central concept, descriptive as much as normative (Dumez, 2014). We adopt Dumez's stance, recognising management as a singular social discipline, articulated around descriptive/normative concepts, in particular the concept of performance which represents its essence and simultaneously its epistemological challenge (Dumez, 2016). We see the management sciences as 'practical' sciences that must provide managerial tools to help organisations flourish. (Hatchuel and Moisdon, 1993), (Moisdon, 2005). Our exploration begins with an examination of current evaluation methods. We then proceed to unravel the mystery of goodwill before suggesting an innovative approach to evaluation, particularly with regard to agility. We will demonstrate the imperative need to align corporate policies with their overall evaluation. Finally, we conclude with the results of our study.

## **1. The limitations of traditional valuation methods.**

The philosophical concept of the "immaterial" dates back to antiquity. Aristotle characterised it by its indivisibility, its absence of destructive passivity and by its self-consciousness. (Verbeke, 1946). The term "intangible asset" appeared in Venetian laws at the end of the Middle Ages and, at the beginning of the 18th century, in patent and copyright law. In the 19th century, registered trademarks were recognized in various countries, which created a legal basis for the idea of branding and marketing assets. (Haskel and Westlake, 2017). In France, patents were recognized by the Law of 1791 (Khan and Sokoloff, 2004) and are now classified as intangible assets... under certain conditions!

Since then, it has been the subject of numerous publications, but they have always focused more on explanation, which is what this first part will attempt to demonstrate. Valuation methods reflect the information needs of investors. They are gradually moving away from the rules of accounting orthodoxy: *"Intangible capital has become increasingly important in many companies, but accounting rules generally do not allow its components to be included in the financial statements published at the end of the year"*, p.12 (Bessieux-Ollier et al 2014), in order to take account of the transformation of the economy from industrial production, a major consumer of tangible investments, to a service economy, a major consumer of disruptive investments.

### **1.1 A look back at traditional valuation methods and a worrying observation**

The valuation of companies reflects the changing information needs of investors, gradually moving away from strict accounting orthodoxy to take account of the economic transition - from heavy industry to a service economy and disruptive innovations. We have seen a move away from Adjusted Net Asset Value, a conservative tool for tax and commercial valuation, towards more dynamic valuation models such as profitability multiples or Discounted Cash Flows (DCF).

## 1.2 Discounted Cash Flow

Rooted in economic history from the early days of the railways and influenced by theorists such as Wellington, Marshal, and especially Fisher, they enjoyed a remarkable boom in the 1980s, encouraged by academic authors (French and Gabrielli, 2005); (Steiger, 2008); (Kruschwitz and Löffler, 2006); (Steiger, 2008) and industry visionaries such as Alfred Sloan. While multiples methods provide a useful approximation, they lack rigour and raise questions about the selection of comparables and the influence of management. The veracity of the data remains crucial, requiring in-depth audits. However, the value lies in assessing a company's ability to maintain profitability over the long term. The use of DCFs has propelled the valuation of companies, especially start-ups, to heights that are often disconnected from their real profit-generating potential. The resulting values are precarious, vulnerable to speculative movements. The DCF method, which is predominant in mergers and acquisitions, bears the scars of its excessive optimism. With estimates based on growth forecasts and weighted average costs of capital that are open to debate, valuation differences can be considerable. Mergers, often justified by expectations of development and synergies, reveal a gap between expectations and reality, with more than half ending in failure (Straub, 2007), (Christensen et al., 2011), financial losses (Borodin et al., 2020) and a negative impact on employment. The literature suggests that these disappointments are often due to an underestimation of the cultural differences between companies (Monin and Vaara, 2007). It seems that it is in failure that explanations are sought, rather than in a proactive approach to modeling and anticipation.

## 1.3 The intangibles taken into account by economists and then by accounting standard-setters.

For statisticians, focusing on intangibles implies a shift away from macroeconomic aggregates toward microeconomic processes and transactions. The magnitude of the necessary conceptual revolution is comparable to the shift from Newtonian to quantum physics.<sup>1</sup> (Smith and Parr, 1989)

Alongside statisticians, some economists have taken into account approaches that define "intellectual capital". (Edvinson, 1997) by recognizing 'human capital, structural or organisational capital, customer capital and network capital' and proposing a list of 29 groups of indicators in the SINE.<sup>2</sup> (Eurostat, 2007)

The revision of the SNA<sup>3</sup> at the end of the 80s led to the consideration of the possibility of transferring certain expenses to fixed assets. led to the possibility of transferring certain expenses to fixed assets.

As a result, the proportion of expenditure taken into account by managers as eligible for capitalisation covers a wide range of areas, specifically R&D, human resources, marketing, organisation in general, information systems and training processes.

All of this is interpreted very flexibly: "In fact, it is certainly insufficient to equate investment in sales and marketing with advertising expenditure alone, and investment in human resources with training expenditure". (Demotes-Mainard, 2003). It has not been possible to incorporate

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<sup>2</sup> SINE: Statistical indicators for the new Economy

<sup>3</sup> SNC: National Accounting System

this broader vision of valuation methods into accounting methods in order to comply with prudence requirements. (Méreaux and Feige, 2022).

There was also a shift in positions on the treatment of differences between the price paid and the value of assets in the early 1980s, with financial statements being better adapted to distinguish intangible assets from goodwill. (Astolfi, 2010)

The adoption of IFRS for listed European companies as a replacement for general accounting standards allows better account to be taken of information on certain intangibles and de facto offers investors better information, while generating an increase in value that may be contested: "the change in standards results overall in a significant increase in profit and financial profitability and, to a lesser extent, in equity, even though the economic reality of the company does not change". (Lenormand and Touchais, 2009)

Gradually, managers will seek to integrate R&D and advertising assets into their business strategy. (Lev, 2001) then brand assets (Stolowy et al., 2001) in their reporting and work to bring them within the scope of IAS 22 & 38.

The international standard-setter observes (IFRS 3.BC 89)<sup>4</sup> that "The Board also agreed with the conclusion reached in IAS 22 and by the Canadian and US standard-setters that the usefulness of the financial statements would be enhanced if a distinction were made between assets acquired in a business combination and goodwill". Our interpretation of this sentence is that there are assets acquired which may not have a carrying amount, but which are identified by the acquirer (e.g. brands), whereas goodwill should remain a carrying amount and that it would be justified to make a specific valuation of certain assets, separate from goodwill, which should remain unidentifiable.

Although there has been much criticism of the inclusion of intangible assets in IFRS 3, their inclusion has gradually been extended on the basis of the relevance of their introduction. This is also underlined by the study carried out for the European Commission (2003), according to which it is "interesting to note that some European countries seem to be relaxing the criterion of reliability of valuation" when it comes to intangible assets. (Astolfi, 2010). A study of the impact of changes in standards on financial reporting led Lenormand and Touchais (2008) to conclude: "In other words, IFRS result in financial information on intangible assets that is more representative of the events embedded in prices, i.e. used and valued by the markets" (Lenormand and Touchais, 2008). (Lenormand and Touchais, 2008)..

However, these new possibilities "do not allow certain assets to be recognised, particularly those linked to human and relational capital" (Guyot, 2010).

#### 1.4 Immaterials in socio-economic theory

We have shown (Antheaume and de Clarens, 2024 ) the growing share of intangibles in GDP and the share of intangibles, which, according to the World Bank, is estimated at 86% for the French economy (Cappelletti, 2018) and we drew attention to "the difficulty of measuring sustainable performance indicators, which must take account of the complexity of organisational performance, a phenomenon that is both topical and potential (Cappelletti, 2012) take account of the effects of regulation (Reynaud, 2003) and complexity in the sense of Morin (Morin, 1988) ".

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<sup>4</sup> IFRS 3 will be referred to as "IFRS 3 Revised" or "IFRS 3 R".

## 1.5 The share of intangible assets in total value is close to 80%.

Explaining the overall value of intangible assets on the basis of the "market to book ratio" is an old idea, but it would probably be more accurate to link intangible assets to "goodwill". (Cazavan-Jeny, 2004)

While the ratio was around 2.41 at the time, it has risen to around 4 today, largely as a result of changes in the economy, with more and more services and activities not accounted for.

Even if this approach may be considered insufficiently established, we can observe a certain stability since the 2000s with an average ratio of around 4, which confirms that the share of "goodwill" or "intangible assets", if we link these two interpretations, is indeed around 75%, to which should be added the share of intangible assets of around 18% already accounted for. (Bessieux-Ollier et al., 2024). The cumulative figure for intangible assets is well over 80%, which is consistent with OECD statements (OECD, 2006).



Figure 2: Evolution of the Price to Book Ratio (source: S&P)

By definition, it is not possible to obtain the same ratio for unlisted companies, except in the case of subsidiaries of listed companies, in which case it would be possible, for the French market, to obtain a valuation using INSEE surveys of financial links. However, it is possible to verify the value using actual transactions, using the V/E ratio calculated by Valutico<sup>5</sup> or data provided by Epsilon Research<sup>6</sup>. The creation of an index, published regularly, is currently under consideration.

Be that as it may, the *price-to-book ratio* reveals a difference between book value and the value perceived by investors, but it does not enable us to understand the nature of that difference.

<sup>5</sup> Valutico is a value measurement company with several databases, including the S&P500 database:

<https://valutico.com/fr/>

<sup>6</sup> EpsilonResearch provides statistics on the EMAT database and publishes the Argos index of EV/EBITDA trends.

## **2. Goodwill: a black box to be opened and the limited breakthrough of the Bercy Thesaurus**

The world of finance and accounting uses the term goodwill to designate the unexplained difference between book value and acquisition value when the accounts of two companies are consolidated following the acquisition of one by the other. "Goodwill is a recurring theme. The first articles on the subject appeared in *Accounting Review* as early as 1936. In an approach inspired by Edgar Morin, the complexity approach could offer a new reading of management theories that integrate intangible aspects into the evaluation of organisational performance. In his work, Morin invites us to consider knowledge in its multi-dimensional, interconnected and often paradoxical nature. Let's apply this vision to the analysis of models such as Kaplan's Balanced Scorecard (1994) and Elkington's Triple Bottom Line (1997). By emphasising not only financial but also social and environmental dimensions, these models are reminiscent of the Morinian concept of thought reform: they seek to capture the complexity of reality by distinguishing between, but also interconnecting, the three spheres of Profit, People and Planet. This tripartite representation is not just a sum of parts, but a dynamic fabric where sustainability emerges from their intersection and interaction. Continuing this exploration, the EFQM method, initiated under the aegis of Jacques Delors to assess European competitiveness, and the Bercy Thesaurus method, developed following a request from the Ministry of Finance in 2009, embody a similar quest to open the 'black box' of organisational goodwill. The architects of this method have developed a taxonomy based on the theory of directed graphs - evoking Berge (1958), Bondy and Murty (2008), Flament (2017), and Rigo (2019) - which underlines a desire to outline the contours of a system where each element is both a point and a relationship, in a network of meanings and effects. This multiplicity of proposed models, whether the 'Thésaurus de Bercy', 'Reference Value' by RVS, or 'Sharing Value' by Jacky Ouziel, demonstrates an ongoing search for analytical frameworks capable of reflecting and respecting the complexity of a company's capital. As Morin would emphasise, behind each model is an attempt to transcend a simplistic vision to embrace a multiple and interdependent reality, where each element assessed contributes to a more complete and sustainable understanding of the company and its impact on the world.

A number of solutions have been proposed to companies, including, without claiming to be exhaustive, the "Thésaurus de Bercy" developed by Goodwill Management, the "Reference Value" developed by the RVS agency, and "Sharing Value" developed by Jacky Ouziel. The analysis grid is usually the same, even when we go into the details of the valuation of each of the "Capitals".<sup>7</sup> (Bessieux-Ollier and Walliser, 2010)

### **2.1 Taxonomy, the basis of the method for rating intangible assets.**

The most widespread scientific method, based on the reasoning of Descartes<sup>8</sup>, consists of breaking down into simpler, more easily measurable elements. The main criticism levelled by accounting professionals comes from the difficulty of measuring intangibles. While this may be true when the aim is to measure the whole, it is no longer, or less, true when the focus is on measuring smaller parts and reconstructing the whole from the parts.

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<sup>7</sup> It is true that goodwill is recognised as an asset, but the aforementioned methods open up this black box by using the vocabulary of economists who consider capital as a factor of production. As economists understand it, capital, as a factor of production, is an asset and corresponds to what enables cash flows to be generated.

<sup>8</sup> Discourse on Method 1637

Determining this taxonomy is particularly delicate given the very nature of the subject: "There have been a number of attempts to identify the various constituents of intellectual assets (i.e. developing a taxonomy). The proliferation of definitions, classifications and measurement techniques in recent years reveals conceptual, methodological, and also practical difficulties. Methodological difficulties appear from the very start as even the term "intellectual assets" is not commonly accepted and some countries tend to use the term "intellectual capital" or "intangibles" or even "knowledge capital". There is a widespread tendency to use the terms "intangibles", "intellectual capital" or "intellectual assets" interchangeably. Some will find differences between these terms, but they refer to the same reality: a non-physical asset with a potential stream of future benefits" <sup>9</sup>(OECD, 2006). Without wishing to be exhaustive, we will cite Sveiby (Sveiby, 1989); (Sveiby, 1997)Edvinsson and Malone (Edvinsson, 1997)Roos, (Roos and Roos, 1997); (Brooking, 1998) Bontis (Bontis, 1998) Teece (Teece, 1998) where the dimensions used to define and evaluate intangibles vary, but can be summarised by the following mind map (Figure 3).

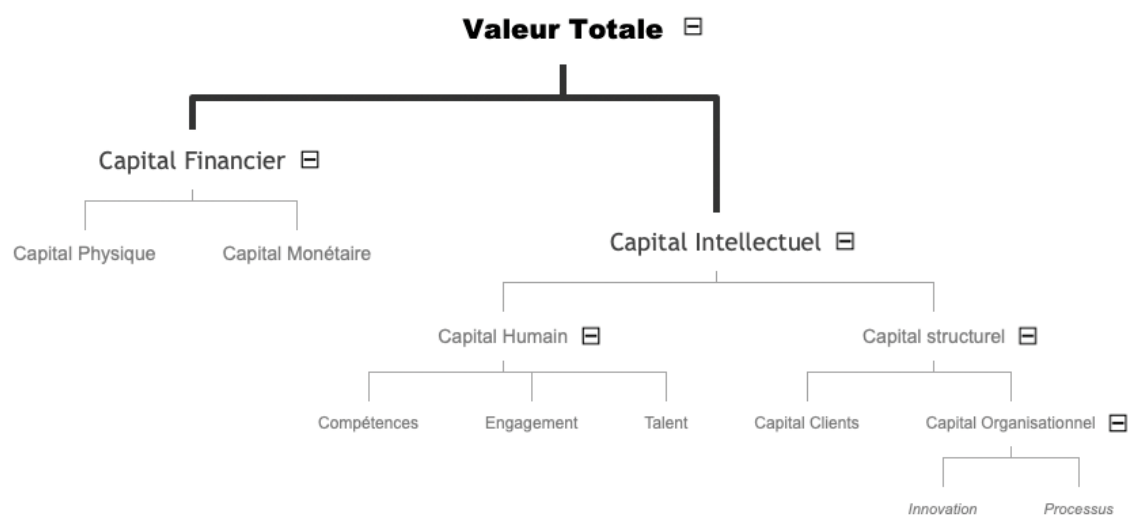


Figure 3: Summary of classifications of "intangible capital" in the literature (Antheaume and de Clarens 2024)

In France, the work of Elisabeth Walliser, Corinne Bessieux-Ollier and Elisabeth Albertini has contributed to a better understanding of intangibles. Walliser and Bessieux have shown the importance of sub-themes in intangible capital: goodwill, intangibles, people, R&D, software, brands, intellectual property, patents and advertising. (Bessieux-Ollier and Walliser, 2010). Bessieux-Ollier points to both the growing importance of intangibles and investors' lack of

<sup>9</sup> A number of attempts have been made to identify the different components of intellectual assets (i.e. to develop a taxonomy). The proliferation of definitions, classifications and measurement techniques in recent years reveals conceptual, methodological and practical difficulties. The methodological difficulties appear from the outset, as even the term "intellectual assets" is not commonly accepted and some countries tend to use the terms "intellectual capital", "intangible assets" or even "knowledge capital". There is a general tendency to use the terms "intangibles", "intellectual capital" or "intellectual assets" interchangeably. Some will find differences between these terms, but they refer to the same reality: a non-physical asset with a potential stream of future benefits.

awareness of their value, as well as the imperfection of the balance sheets presented (Bessieux-Ollier et al., 2014). It should be noted that in more recent approaches to taxonomy, and in particular that of the OECD, a new category, "relational capital", has emerged as central.<sup>10</sup> The taxonomy for intangible assets proposed by the European Commission, based on the work of the MERITUM project, therefore classifies intangible assets into three branches: Human Capital, Relational Capital and Structural Capital.

## 2.2 The ten-asset taxonomy of the 2017 Thesaurus

The great merit of the "Bercy Thesaurus" is that it proposed an initial taxonomy of intangible assets in the 2011 and 2012 versions, which was taken up and improved in Fustec's thesis (Fustec, 2017)

The taxonomy is based on ten intangible 'capitals' (Figure 4), some of which could be grouped together: for example people and knowledge, or customers and partners.

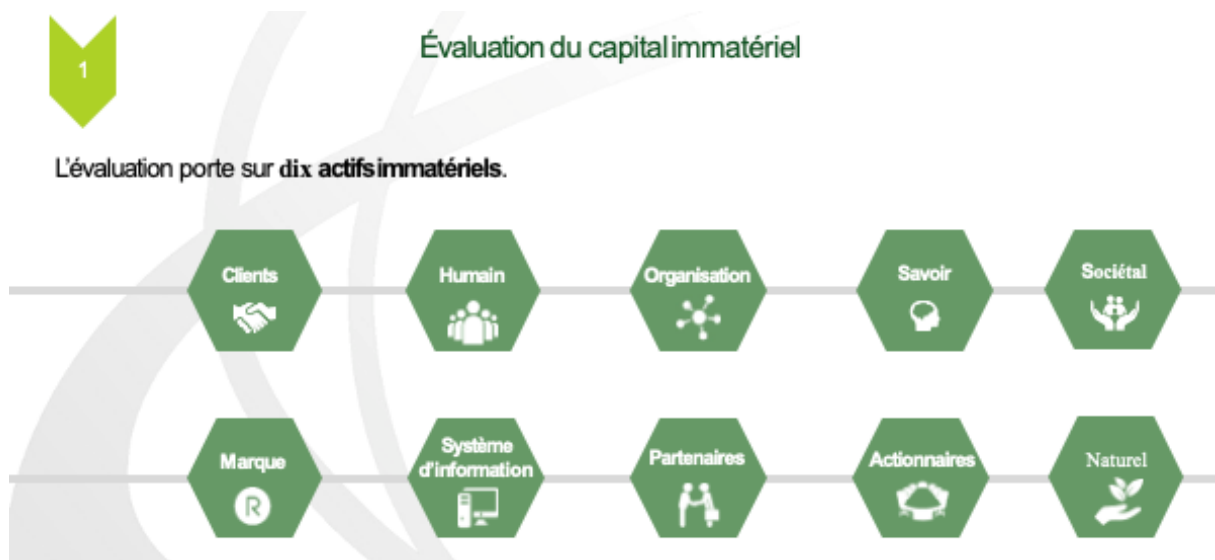


Figure 4: Goodwill Management's ten-capital classification (2021)

The first comment to be made here relates to the difficulty of representing such a model, with ten dimensions deemed to be beyond human cognitive representation capabilities (Ehrlich et al., 1993) although some maintain that we would be capable of understanding 11 dimensions (Markram, 2006). It also comes spontaneously to mind that certain assets could be merged, with knowledge forming part of Human, or customers and partners being grouped together under Stakeholders.

## 2.3 A "market law" approach

While the taxonomy makes it possible to break down the elements to be measured, it entails an obligation to give respective weights to each of the branches that make it up, and the thesaurus is based on the "law of the market", which would like supply to be equal to demand and, consequently, supply assets to be equal to demand assets. Based on this (questionable)

<sup>10</sup> For more information on the different taxonomies, see Appendix 1.

assumption, "customer capital" in the thesaurus is invariably considered to represent 50% of the overall value, whatever the sector of activity.

Par convention, on considère que la part du cash-flow d'une année attribuable à un actif d'o fre est proportionnelle au poids qu'il représente dans le total des investissements nécessaires pour créer ou reconstituer ces actifs.

Poids des actifs dans le processus de création de valeur, en %													
Secteur	Industrie	Energie	Eau, Déchets	Construction	Commerce	Logistique, transport	Hôtellerie, restauration	Prestations intellectuelles	Banque, assurance	Immobilier	Autres services	Administration	Autres secteurs
Code NAF	B,C	D	E	F	G	H	I	J,M	K	L	N	OP,Q	R,ST
Clients	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Humain	15%	17%	15%	15%	15%	16%	14%	29%	16%	24%	26%	21%	27%
Organisation	3%	6%	7%	3%	5%	10%	6%	1%	3%	4%	4%	4%	7%
SI	3%	4%	4%	3%	5%	3%	3%	2%	10%	4%	4%	7%	2%
Savoir	10%	12%	6%	5%	1%	2%	3%	11%	3%	4%	4%	6%	2%
Marque	12%	4%	5%	6%	14%	4%	16%	2%	9%	7%	6%	1%	4%
Partenaires	3%	2%	2%	5%	10%	3%	2%	0%	3%	2%	2%	4%	2%
Actionnaires	2%	2%	2%	1%	1%	2%	1%	1%	2%	1%	2%	1%	1%
Nature	1%	2%	2%	4%	3%	2%	1%	0%	1%	1%	1%	3%	1%
Sociétal	1%	2%	8%	3%	2%	7%	2%	1%	3%	1%	2%	2%	2%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Calculs Goodwill-management, d'après le Thésaurus Capital Immatériel 2019, p. 160.

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Table 1: Weighting of intangible assets by business sector (source: Goodwill Management, 2021)

Apart from the fact that it is questionable in principle, this approach means that the relative weight of certain other assets is completely emptied of any substance, and it now seems impossible to consider, for example, that 'nature' represents only a very small part of the whole, or even none at all.

#### 2.4 A proprietary method that is not open and difficult to evaluate

The 2019 thesaurus is based on a work thesis (Fustec, 2017) which gives us some keys to understanding rating and valuation.

We have detailed an analysis of this method (Antheaume and de Clarens, 2024) and highlighted the "proprietary" approach, which is both complicated and somewhat opaque in terms of calculation methods. We remain unconvinced by the use of an approach that purports to be based on the valuation of future cash flows, replacing the reality of cash flows with an assessment based on the quality of the indicators. However, the assumptions used for the DCF calculation are based on a cash flow growth rate of 2% and a weighted average cost of capital of 10.1%. In our view, this method of calculating DCFs, without validating a *business plan* or terminal value, is questionable.

The version of the 2019 thesaurus application to which we have had access is an IT tool which, as an input, asks you to score the ten intangible assets identified by the method, either by providing activity data which will be transformed into a score by software, or by giving a score yourself for certain assets (see example below). The output is a score out of 20. The use of this score to modify cash flows is not implemented in the software, and there are no instructions relating to the cost of capital, which is left entirely to the discretion of the user. There is a simplified version based on seven assets which proposes a valuation using recommended EBIDA multiples. These recommended multiples are also set by the application on the basis of unknown criteria.

$$\text{The Value Reference} = \sum_{i=1}^{\infty} \left( \frac{\text{cash flow normatif d'origine}(1+CO)}{(1+ICC)} \right)^i$$

Figure 5: Formula for calculating reference value (Fustec, 2017)

which piles up a series of parameters (6 in total) with empirically determined weightings<sup>11</sup> and then values them on the basis of a future cash flow, without validating the business plan and based on a cash flow growth rate of 2% (why?) and a weighted average cost of capital of 10.1% (why?), with no terminal value, seems to us to be unconvincing.

## 2.5 Towards a complex understanding of the intangible value of companies: the ambivalent role of ESG ratings.

Should we consider the development of ESG ratings as keys to deciphering the intangible components of company value with greater finesse? This question originated long before the advent of ESG ratings, revealing a similarity in principle to earlier studies. Indeed, the literature exploring the triad between environmental disclosure, environmental performance and economic performance is rich but offers nuanced conclusions. As pointed out by Al-Tuwaijri et al. in 2004, the divergences observed result from the theoretical frameworks adopted to link economic performance to environmental performance and from the data analysis methods used. Research into the voluntary disclosure of environmental information (Plumlee et al., 2015), as well as research into the existence of ESG ratings (Fatemi et al., 2018), attests to a real impact on company value. However, these studies also highlight the importance of the form that this disclosure takes. The way in which information is presented has a considerable influence on the perception of a company's value, suggesting the adoption of strategies that may be no more than respectable facades (Aras and Crowther, 2009; Milne et al., 2009; Cho et al., 2015).

When a positive effect is observed, it tends to be attenuated in companies belonging to sensitive sectors or those which are followed by a large number of analysts (Aerts et al., 2008). Against this backdrop, calls to improve the quality of standardisation, although long-standing (Aras and Crowther, 2008), remain highly topical. According to Bose (2020), the standardisation currently underway in the field of ESG ratings does not yet meet the requirements of high-quality, nuanced information. It is clear that we are still a long way from putting in place ESG standards that could truly enhance the value of intangible assets.

In their recent study, Barkmeyer et al (2023) point to the many biases present in the selection of data sources used to develop ESG ratings, a phenomenon that poses a significant risk for investors who rely on them. Thus, the road to a richer understanding and effective application of ESG standards in the valuation of corporate intangibles remains paved with challenges and uncertainties.

To conclude this second part, the use of the 2019 thesaurus has led us to establish that it is a breakthrough, providing for the first time a rating of intangible assets. Nevertheless, this method does not provide a better explanation of the components of intangible assets, the relationships between these components and their impact on total value. It is a method of notation and not of explanation. It is not enough to aggregate the ratings; it is necessary to understand the synergies

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<sup>11</sup> See Antheaume and de Clarens 2024 p. 14 and 15

between the components of intangible assets, and to verify their alignment. For its part, ESG rating is at a stage that does not meet the need to explain the value of intangibles.

We have therefore sought to design a method that takes better account of certain aspects of the components of intangible assets. This is the subject of the following section.

### **3. the SOS model: a normative proposal**

#### 3.1 Towards an integrated vision of management: The SOS method and complex thinking

At the heart of our approach is an innovative method called SOS (Suivi des Organisations Soutenables), which is part of a heterodox vision of the economy. This approach doesn't just take account of new management criteria; it embraces them fully, giving a large place to societal and environmental issues and allowing us to check the alignment between strategy, profitability and sustainability.

The SOS method, far from being a simple valuation audit tool, is intended to be a genuine management tool designed to measure and optimise the creation of wealth within a company. It is based on the principle of complex thinking, which encourages in-depth analysis of the interaction between assets and the alignment between different dimensions (Morin, 2014).

Our contribution differs from traditional approaches in its initial focus on the entrepreneur's understanding of the sources of intangible value and his ability to use this understanding as a strategic and financial lever. This process reconnects value analysis with tools for valuing intangible assets.

Furthermore, our research is fully in line with the complexity perspective (Morin, 2014). We introduce coefficients of influence between dimensions and take into account the effects of regulation (Friedberg, 1993; Bréchet, 2022), which leads us to a fine-grained analysis of alignment issues, in particular by checking that internal policies and processes are not contradictory.

Recent events have reminded us of an often overlooked truth: the primary function of management is to manage risks. These risks, whether financial, natural, human, geostrategic or climatic, are examined in their complexity, i.e. their interdependence (Morin, 2014). We postulate that risk must be considered as a dimension that cuts across all the company's assets, and that the best managerial response lies in the organisation's capacity for absorption and innovation, reinforced by a dimension of 'agility & resilience'.

Finally, our objective of deciphering goodwill implies a taxonomy and hierarchy of assets, and we emphasise the need to verify the alignment between the company's values and their implementation. This search for alignment is carried out through the company's *raison d'être*, profitability and sustainability, integrating societal and natural preservation issues while respecting planetary limits (Rockstrom et al., 2009; Antonini and Larrinaga, 2017; Rockstrom et al., 2021) and social minimums (Raworth, 2017). This integration of societal and environmental issues has become essential, reinforced by legal provisions such as the NRE law and the PACTE law in France, which introduced mission-driven companies.

### 3.2 The company's fundamental tripartite structure: Finance, People and Sustainability

There is no doubt that a company without sufficient profitability or cash flow is doomed to disappear. This undeniable principle places financial issues as the first fundamental pillar on which a business rests. However, a company that fails to attract and retain its employees, that fails to organise itself effectively, or whose governance is not inclusive, cannot survive in the long term. Human and organisational issues therefore form the second pillar of our corporate architecture.

The third pillar, which is just as crucial, concerns sustainability in its broadest sense. A company cannot exist without the proper functioning of society and its institutions, nor without the capacity of ecosystems to support life on Earth. It is therefore essential to assess whether a company contributes to weakening or strengthening these vital conditions.

Our architecture is therefore based on three pillars of equal importance, with the failure of one inevitably leading to the downfall of the whole. These three pillars are broken down into nine assets, themselves subdivided into sub-assets for optimum understanding and management.

Faced with the fundamental management challenge of risk management - an issue highlighted by voluntary CEO reports, which note both the business opportunities linked to Intellectual Capital and the risks it can pose (Albertini, 2021) - we introduce two cross-cutting dimensions: agility and resilience. These attributes are seen as essential responses to minimise the impact of risks. A third dimension, alignment, guarantees the coherence of the whole.

Our preference for the term 'assets' rather than the more commonly used 'capital' is based on the belief that it is assets that actually create value. The traditional accounting definition of an asset needs to be broadened to include the intangible goods and services that a company benefits from without owning them. It is therefore essential to understand the mechanisms by which a company benefits from these assets and what it must do to preserve them. As a result, the consideration to be entered on the liabilities side of the balance sheet will be distinct from financial equity, and the redistribution could concern the creators of these intangible assets.

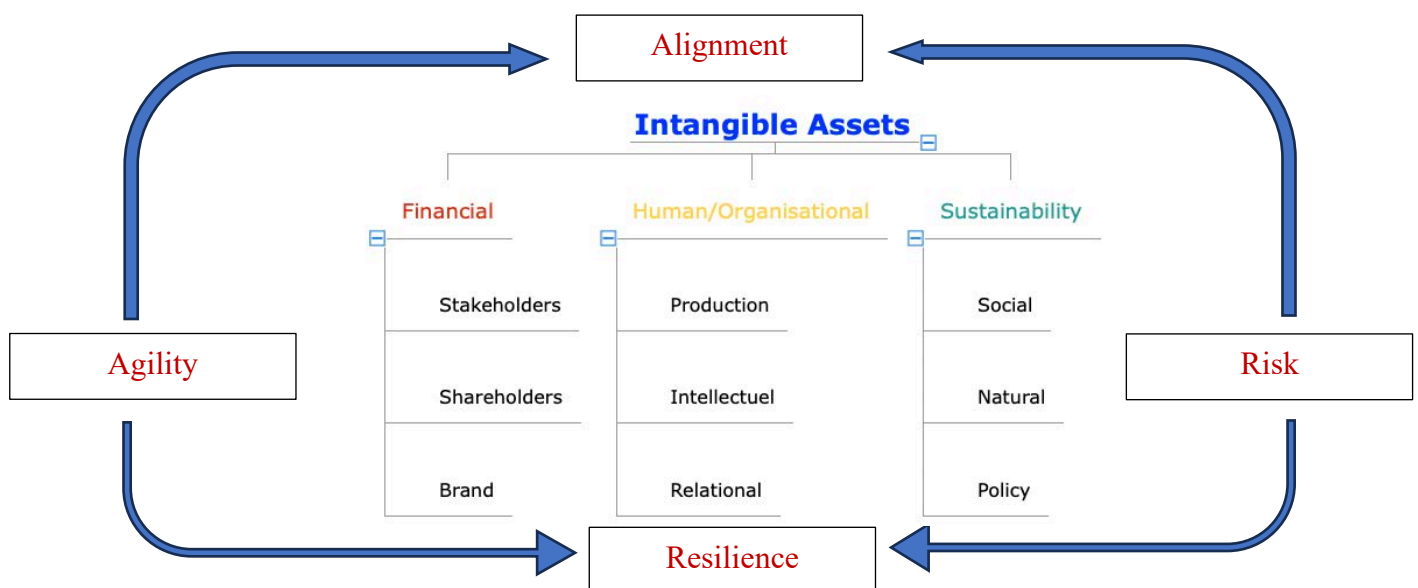


Figure 5: Intangible assets model

### 3.3 The need to apply asset relationship coefficients

Our research lies at the crossroads of two encompassing theories, complexity in the sense of Edgar Morin (Morin, 2014) and Dynamic Capacities (Teece, 2007). This implies taking into account the existing influences between the different assets. To give weight to these influences, we used the MICMAC method <sup>12</sup>method (Godet, 2007) by asking a group of 10 experts<sup>13</sup> and 15 CCA-CGAO master's students, made up of practitioners and academics, to give their valuation of the influences via a square matrix where each of the sub-assets is both in a row and in a column, to take the average and to enter the matrix thus defined into the tool, which made it possible to reduce the number of cases where it is necessary to apply a coefficient to the various assets. This does not affect the postulate of equal importance of the pillars. The adoption of the MICMAC method, proposed by Michel Godet in his work on strategic foresight, is justified by its effectiveness in revealing the complex interdependencies between variables within an organisation. This method makes it possible to identify and analyse the key variables that influence a company's assets, by evaluating the coefficients of direct and indirect influence between these variables.(Arcade et al., 2007)

We have also scheduled a verification of these coefficients, using Bayesian networks, which will be carried out as a project by students in the first semester of next year.

		Parties prenantes				Financier				Humain				Relationnel				Soutenable										
		Risques	clients	fournisseurs	Disponibilité	Implication	profil	produit	employeur	Interne	SI/data	R&D	process	organisation	Richesse H	gouvernance	Managérial	Compétences	marketing R	environnement	Naturel	biodiversité	produits	local	Sociétal	réilience	droits H	
Parties prenantes	risques	1	1,2	0,9	0,8	1	0,8	1,2	1,2	1,2	0,8	1	0,8	1,1	1,2	1,1	1,1	1,2	1,1	0,9	0,8	1	1,1	1	0,8			
	clients	1,2	1	0,8	0,8	1	0,8	1,2	1	1,1	0,8	1,2	0,8	1,1	1,1	1,1	0,9	0,8	0,8	0,8	0,8	1,2	0,9	1	1			
	fournisseurs	0,8	1,2	1	0,8	1	0,8	1,2	0,8	0,8	1,2	1,2	0,7	1,1	1,2	0,7	1,1	0,8	0,8	1	1	1,2	0,8	0,8	1			
Actionnaires	Disponibilité	1,3	0,8	1,1	1	1	0,8	0,7	0,9	1	1,3	1,3	0,7	0,8	0,8	1,2	1,2	0,8	0,7	1,1	1,1	0,8	1,1	1,1	0,8			
	Implication	1	0,8	0,8	1,1	1	1,1	0,9	1	1,2	1	1,2	0,8	0,9	1,2	1,2	1,1	1,1	1	1	1,2	1,2	1,1	1,1	1,3			
Marque	profil	1	0,7	0,9	0,7	1,2	1	0,7	1,2	1,2	1	1,2	0,8	0,8	1,1	1,2	0,9	0,9	0,9	1,1	1,1	0,8	1,1	1,1	1			
	produit	0,8	1,2	1,2	1	1,2	1	1	0,9	1,1	0,8	1,3	1,2	1,1	1,2	1	0,8	0,7	1,2	1,2	1,2	1	0,8	0,8	0,7			
	employeur	1,2	1,2	0,8	0,8	0,8	1	1,1	1	1,2	0,7	1,2	1,1	1	1,3	1	0,8	0,7	0,8	0,9	0,9	1,2	0,9	0,9	0,9			
	interne	1,3	1,3	0,7	0,7	1	0,8	1,3	1,2	1	0,7	1,2	1	0,8	1,3	1,3	0,9	0,8	1	0,7	0,7	1	0,7	0,8	1			
Production	SI/data	1,3	1,2	0,9	0,8	0,8	1,2	1	0,8	1	1,2	1,3	1,3	1,3	0,1	0,7	0,8	1	1,2	1,2	1,2	0,8	0,8	0,8	0,9			
	R&D	1,3	1,1	0,9	1,1	1	1	1,3	1,3	1,3	1,2	1	1,2	1,2	1,3	1,2	0,8	0,8	0,7	0,8	0,8	0,8	0,8	1	0,8			
Intellectuel	process	1,2	1,1	0,9	0,9	0,8	0,8	1,3	1,3	1,3	1,2	1,3	1	0,9	1,2	1,1	0,8	1	1,1	0,8	0,8	1,1	0,8	1	0,8			
	organisation	1,3	0,9	0,9	0,8	1,1	1,2	0,8	1,1	1,1	1	1,3	1,1	1	1,3	0,8	1,2	1,1	0,9	0,8	0,8	0,9	0,9	1	0,8			
	Richesse H	0,8	1,1	1,1	0,7	0,9	1	1,2	1,2	1,3	1	1,3	1,1	1	1	0,8	1,1	0,8	0,7	0,8	0,8	1,2	1,2	1,2	1,2	0,9		
	gouvernance	1	1,3	1,3	0,7	0,8	0,9	1	1,3	1,3	1,3	1,3	1,3	1,3	1	1,2	1,1	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,8			
Relationnel	Managérial	1,2	1,3	1,2	0,8	0,8	0,8	1,2	1,2	1,2	1,1	1,2	1,3	1,2	1,3	1	1,2	1,1	0,7	0,7	1,1	1,1	1,1	0,8				
	Compétences	1,3	1,2	1,2	0,7	0,7	0,7	1,1	1,2	1,3	1,2	1,2	1,3	1,3	1,2	1,3	1,2	1	0,9	1,1	0,8	1,1	1,2	1,3	0,8			
Naturel	Marketing R	1,2	1,3	1,2	0,7	0,7	0,7	1,3	1,2	1,1	0,9	1,1	1,1	1,3	1,3	1,1	1,1	0,9	1	0,9	0,7	1,1	0,7	0,9	0,7			
	environnement	1,3	0,9	0,9	1	1	1	0,9	1,1	1,1	0,9	1,3	1,1	1	1,3	1,2	0,7	0,7	0,7	1,3	1,3	1	0,8	1	1			
	biodiversité	1,3	0,8	1	0,8	0,8	0,8	1	1,2	1,2	0,8	1,3	0,7	0,9	1,3	1,1	0,8	0,7	1,1	1,3	1	1,3	0,8	1,2	0,8			
Sociétal	produits	1,2	0,9	0,9	1,1	1	1	1	1,2	1,2	1,1	1,1	1,2	1,1	1,1	1,1	0,7	0,9	1,3	1,3	1	0,9	0,9	1				
	local	0,8	1,1	1,1	1,2	1,2	1,2	0,8	1,2	1,3	0,9	1,2	1,3	0,9	1,3	0,8	0,9	0,7	1,1	1,2	1,2	0,8	1	1,2	1			
	réilience	1,3	1,2	1,2	0,7	0,9	0,8	0,9	1,2	1,3	1,2	1,1	1	1	1,3	1,2	1,1	0,9	1,2	1,1	1,1	0,9	0,9	1	1,1			
	droits H	1	0,9	0,9	0,7	1,2	1,1	0,9	1,3	1,3	1,3	0,8	1,1	0,8	1,3	1,1	0,7	0,9	0,8	0,8	1	1,2	1,1	1	1,1			

Table 3: Influence coefficients between Assets

### 3.4 Diversity and complexity of investments in intangible assets by business sector

As highlighted in the 2019 Thesaurus, the valuation of a company's assets varies significantly depending on its sector of activity, illustrating the intrinsic complexity of sectoral economic dynamics. For example, according to its annual reports for 2008, 2009 and 2010, Danone allocated more than 10% of its annual sales to its brands, while spending on research and development represented less than 2% of the same figure. In contrast, Sanofi spent 15% of its sales on Research & Development and less than 3% on its brands (Fustec, 2017).

<sup>12</sup> The objective of the MICMAC method is to describe a system using a matrix that links all the elements that make up the system. Based on this description, this method aims to reveal the main influential and dependent variables, and hence the variables essential to the system's evolution.

<sup>13</sup> <https://valueandco.com/conseil-scientifique/>

This diversity of financial allocations raises the question of determining the relative weight of assets. This assessment can be carried out by a group of experts, by analysing the proportion of investment made by the company in its various assets, or directly by calculating their replacement cost. Where feasible, we prefer an investment-based approach. Although this method can be biased, it avoids the difficulties associated with finding precise comparables or arbitrarily setting coefficients based on a limited number of case studies.

3.5 Process : *A management and development tool*

Understanding the mechanisms by which wealth is created involves a series of steps that must be followed in order to understand, analyse, rate and, ultimately, value the company.

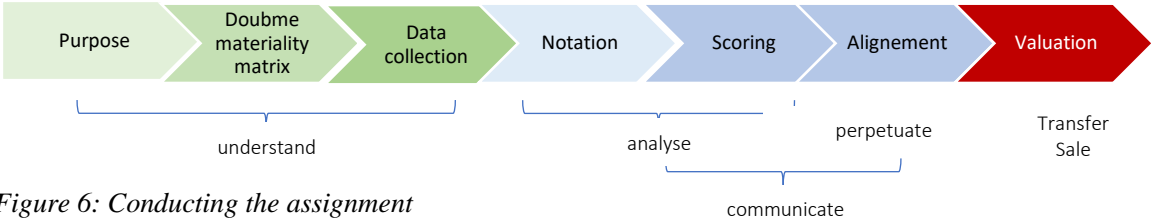


Figure 6: Conducting the assignment

3.5.1 Purpose

*Understanding the company, its « Reason to be », its social business model and its materiality matrix*

Adapting the measuring instrument to the object being studied is a technical obligation in the case of physical measurements; in this case, we need to understand the purpose of the business in order to know what really needs to be measured. Many companies are created as a result of the invention of a product or service, and it is common for the creator of the company to be convinced of the usefulness of his products and services, but not to ask the question of the purpose, which in fact is the cement that will ensure the permanence of the company. For example, a company born with the aim of helping people to move around will be able to switch from the cart to the steam car, whereas a company designed to use the steam engine will probably not survive the arrival of the internal combustion engine. Sustainability, which is our guiding principle, presupposes that we know the company's *raison d'être*, so that we can check that the strategy we have put in place is in line with the desired goal.

3.5.2 *The dual materiality matrix*

The principle of double materiality, which was adopted by EFRAG<sup>14</sup> to build the European standard for extra-financial reporting, has been approved by the European Parliament and enters into force on 1<sup>er</sup> January 2024, with publication of the first reports in 2025<sup>15</sup> for companies with more than 500 employees and a balance sheet total of €20m and/or turnover of €40m, consists of taking into account both financial and social aspects. (Viard, 2022), (Cappelletti et al., 2018). The use of a double materiality matrix is the starting point for any CSR analysis of a company. It enables us to place the impacts for the company and its stakeholders on a graph, assigning

<sup>14</sup> EFRAG: European Financial Reporting Advisory Group  
<sup>15</sup> These thresholds, which are still under discussion, are likely to be modified.

them a specific urgency and importance. This tool enables us to understand the issues and prioritise them. It must take into account changes over time and positioning in relation to global limits. For each impact, the dual materiality matrix<sup>16</sup> must be divided into themes and 6 variables, starting by differentiating between internal and external aspects, then simultaneously taking into account a financial dimension and a physical dimension, and differentiating between urgency and probability of occurrence. Taking all these dimensions into account makes for a complex representation, which is made possible by using a tool that allows responses to be filtered according to 4 criteria at a time.

We propose that the dual materiality matrix, which is generally limited to the economic, social and environmental dimensions, should correspond to the three pillars of the SOS model and be extended to the cross-cutting dimensions.

The double materiality matrix enables us to see the points that have the greatest impact on the company. This will enable us to prioritise and guide the intangible asset rating process.

The tool we have designed is intended to be closer to the very essence of dual materiality, financial on the one hand and physical on the other. For each impact, our application provides a dual measurement, financial and physical, together with measures of urgency and probability of occurrence. Only an online application can provide representations that include filters, enabling impacts to be viewed successively in terms of their various components. What's more, the computerised solution makes it easy to multiply the number of people involved, enabling different points of view to be confronted, for example within the company by different members of the CODIR, opening up a debate that should ultimately lead to better alignment of strategies and actions.

### *3.5.3 Gathering information about the company*

The information gathered covers both accounting indicators and non-accounting figures, for example relating to human wealth or the measurement of natural or social impact indicators.

In particular, the accounting indicators will enable us to draw up a rating diagram of the fundamentals of the financial situation, profitability, robustness and solvency. To do this, we use the information contained in the tax return, which is updated using dedicated NOTA-PME tools<sup>17</sup>. We also use data supplied by specialist companies to research comparable companies, gathering information on various ratios, as well as indicators supplied by government departments, such as gender inequality and geographical desirability.

### 3.5. Scoring

In the case of qualitative ratings, the main method used is a questionnaire survey (Vilatte, 2007) using existing scales wherever possible (Roussel, 2005). Surveys are also used where there is a need for multiple respondents (human assets, confidence index, agility, resilience, etc.).

Responses are analysed either in the traditional way, by averaging the marks awarded to a subset of questions, or by matrix calculations, or by using fuzzy mathematical methods (*fuzzy*

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<sup>16</sup> Or IRO for Impacts, Risks and Opportunities in EFRAG terminology.

<sup>17</sup> NOTA PME: Nota-PME is a company offering rating and financial analysis services based on data from infogreffe, the commercial court database.

numbers). (Bottani, 2009); (Lin et al., 2006). Sometimes it will be necessary to combine several methods, as we will see in the case of agility below.

This questionnaire, designed to reflect the multi-level structure of the company, is structured around three main pillars: 9 Assets, divided into 21 dimensions and sub-dimensions for which the average score is calculated. In addition, three cross-cutting assets - Agility, Resilience and Risk - incorporate a further 14 dimensions. In total, the questionnaire consists of 285 questions, illustrating the diversity and complexity of the aspects assessed.

Responses to the questions are structured in two main formats: 80 5-dimensional scales that provide a fine granularity of responses, and mathematical functions that enable the software to assign scores automatically. For example, to measure the flexibility of business applications, responses range from "we have no control over the application" to "modifications are quick and easy", with respondents able to position themselves precisely on a scale graduated by a cursor.

For questions where the answer is a number, an appropriate mathematical function is used to transform this number into a score. Functions can be linear, exponential (positive or negative), or logarithmic, depending on the nature of the dimension being assessed.

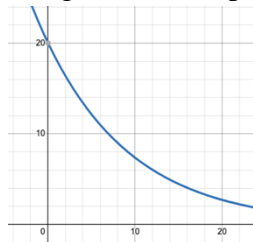


Figure 7

For example, the average age of products is transformed into a score by the equation  $f(x)=20*\exp(-0.1x)$  where  $x$  is the age in years, with the consideration that the optimal life of a product must not exceed 25 years and that the average score (10/20) is awarded to a 6 year old product.

The answers to certain questions can be obtained with an API on a specialised service. For example, INSEE will provide a note answering the question: is your company located in a pleasant area? or the Egapro file, which provides information on inequalities between men and women. This information, obtained directly, saves a certain amount of time in data collection and can sometimes confirm or refute information, as well as helping to measure the sincerity of respondents.

All the questions, types of answers and functions are available to all academics and professionals who request them.

### 3.5.6 Surveys of managers and employees

As part of our evaluation methodology, it is often essential to obtain direct feedback from stakeholders. For this reason, we conduct targeted surveys of the publics concerned. These surveys, based on questionnaires derived from existing or adapted scales, enable us to capture a wide range of perspectives.

By way of illustration, a survey dedicated to measuring interpersonal skills is sent to employees, segmented into two distinct groups: managers and employees. The validity of the survey is ensured by the response rate obtained, and it is administered directly by our team. Only the overall results are shared with the company, thus preserving individual confidentiality.

The result of this survey adjusts the final score obtained by the main questionnaire, thus integrating a qualitative dimension to the quantitative data previously collected. This duality of information is crucial to an exhaustive and accurate assessment.

It is also relevant to detail the process by which the sub-dimensions of an asset are identified, highlighting the need for a proper translation of qualitative information into measurable scales.

## 3.6 Cross-cutting dimensions

The method also makes use of the 'cross-cutting dimensions' of Agility, Resilience and Alignment, which have an impact on all the assets, and we detail below the specific case of measuring agility.

Finally, we can mobilise a set of around thirty additional modules to study certain subjects in greater detail, using academic measurement scales (Dupret et al., 2012), (Courtois et al., 2020), (Berthon et al., 2010), (Krafft et al., 2013), (Beugelsdijk and Koen, 2006), (Flatten et al., 2011), (Zahra and George, 2002), (Chauvet, 2003), (Amundsen and Martinsen, 2014), (Roehrich, 1994), (Niedhammer et al., 2006), (Hadchiti et al., 2021), (Messaoudi and El Abidi, 2021), (Gardès, 2018), (Brien et al., 2008), (Trousselle, 2014), (Békaert et al., 2012).

### 3.6.1 Taking cross-functional dimensions into account: the case of agility

We have postulated that Agility is a cross-cutting dimension that meets the need to measure the company's ability to respond to all the risks to which it is exposed. We have chosen to highlight this cross-cutting dimension, which is present in all 3 assets, in order to explain some of the calculation methods for each of the assets used in this method. Agility is a means available to the company to mitigate the consequences of the risks it faces.

- Lexical analysis

The concept of agility in management science began with the publication of the "manifesto (Beck and Beedle, 2001) which focused on the issues of agility in information systems and led to the Scrum method.

In this method, the highest priority is given to customer satisfaction, while facilitating change within the company, all within a framework of cycles.

Since then, however, agility has been extended to all areas of business management, the literature on the subject is abundant, and value scales have been proposed.

We will analyse the corpus using Benzecri's method method (Benzécri, 1979) using Iramuteq software.

The corpus is made up of 877878 occurrences divided into 23734 forms made up of 10789 Hapaxes.

We're going to use several methods to gain knowledge of the concept, which will then enable us to model the notation.

We will begin with a lexical analysis based on academic articles and we are obliged to divide according to language, in this case French or English.

The corpus consists of 35 academic articles (list in appendix 1)

A lexicographical analysis of this literature using the Iramuteq software<sup>18</sup>, using a Kamada Kawai graph, reveals agility as a company/organisation that uses new processes to enable change and as a set of capabilities and skills that encourage innovation. Agility also has a strong link with management and is strongly correlated with information. Finally, agility is expressed directly in terms of putting a team into practice on a project and changing practices.

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<sup>18</sup> IRaMuTeQ is being developed by [LERASS](#)



<b>Charbonnier- Voirin</b>	<b>Ferrante</b>	<b>Sabben</b>
Themes	Concepts	Variables
Human resources Strategic direction Cooperation Customer relations	Reactivity Flexibility Speed Expertise	Collaboration Experiment Anchoring Liberalisation Iteration Socialisation

Table 4: Charbonnier-Voirin, Ferrante and Sabben measurement scales

We have chosen to score agility using the Sabben scale scale (Sabben, 2020) which proposes variables and not just themes and concepts.

This scale is built around six relative variables (collaboration, experimentation, anchoring, liberalisation, iteration, socialisation), as well as 11 influencing factors for identifying change (natural change, microscopic change, cognitive change, effectiveness of change, stability of change, framing: design and implementation, stakeholder mapping, group dynamics, working conditions, involvement, monitoring of metrics).

"The 11 influencing factors are characteristic of the change process, which is made up of two main stages, six identification factors and five other tooling factors, taken from the literature review" Sabben p;114

The agility rating, while requiring a great deal of attention, is no different from other assets. However, the valuation seems unrealistic. This has led us to treat agility as a cross-cutting dimension, the effects of which are felt across all assets.

Agility, like innovation, depends on dynamic capabilities, particularly in times of uncertainty (Irwin et al., 2022) and depend on a track record of absorptive capacity (Zahra and George, 2002)for which a measurement scale exists (Chauvet, 2003), (Flatten et al., 2011). This scale comprises 4 dimensions: Acquire, Assimilate, Transform and Exploit.

<b>Dimensions</b>	<b>Composants</b>	<b>Themes</b>	<b>Citations</b>
<b>Acquisition</b>	Investissements préalables	Tolérance au risque	Cohen et Levinthal (1990); Song et Parry (1993); Mowery, Oxley et Silverman (1996); Kim (1998); Lahti et Beyerlein (2000); Zahra et George (2002)
	Motivation à partager des connaissances	Intensité informationnelle	Cohen et Levinthal (1990); Mohr et Spekman (1994); Stork et Hill (2000); Szulanski (2000); Zahra et George (2002)
<b>Assimilation</b>	Compréhension apports	Interprétation	Cohen et Levinthal (1990); Dodgson (1993); Szulanski (1996, 2000); Kim (1998); Lane et Lubatkin (1998); Gruenfeld, Martorana et Fan (2000)
		Remise en question	
<b>Transformation</b>	Internalisation	Recodification	Zahra et George (2002); Kim (1998); Gruenfeld, Martorana et Fan (2000); Salk et Brannen (2000)
		Amélioration	
<b>Exploitation</b>	Utilisation	Compétences clefs	Cohen et Levinthal (1990); Szulanski (1996, 2000); Kim (1998); Lane et Lubatkin (1998)

Table 5: Dimensions of agility (Source: Chauvet, 2003)

- Method of implementation

Three different sets of questions are used.

Firstly, the questions relating to the Sabben scale based on the six variables relating to the concept of agile management, divided into 15 sub-dimensions (and 32 questions) are addressed to all the employees concerned.

Secondly, the questions on absorption capacity, an antecedent of agility, relating to the Chauvet scale, are put to the directors and/or managers and are broken down into 35 questions.

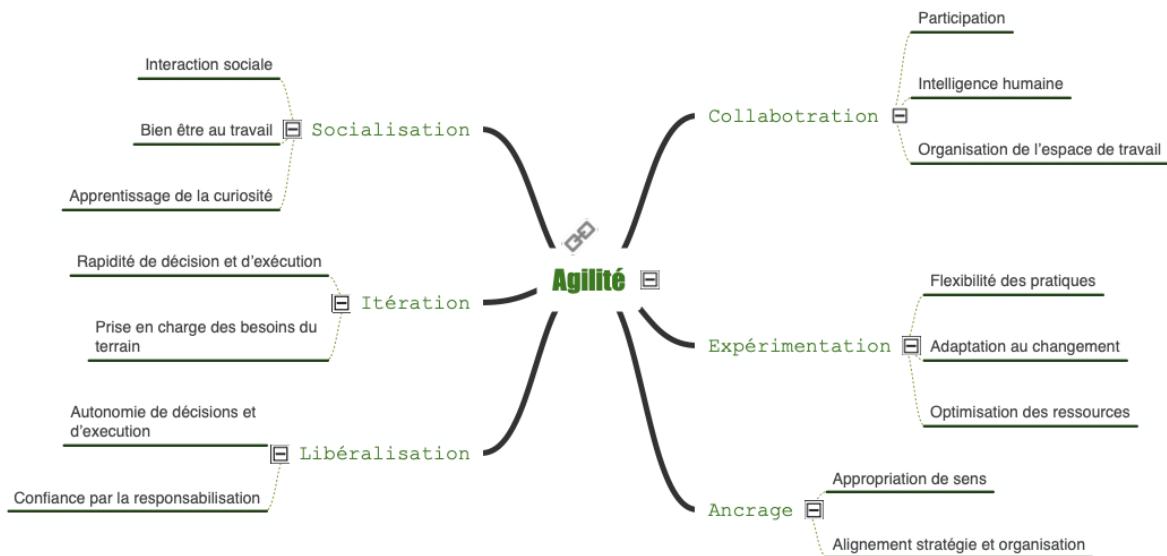


Figure 9: Breakdown of agility rating using the Sabben scale

Finally, certain parameters specific to the company must be taken into account and are included in the general questionnaire in order to gather managers' perceptions. The themes are as follows: participation, human intelligence, organisation of workspaces, flexibility of practices, adaptation to change, optimisation of resources, appropriation of meaning, autonomy of decision and execution, confidence through empowerment, speed of decision and execution, taking charge of needs on the ground, social interaction, well-being at work, learning through curiosity. Each of these themes is the subject of a series of questions to which a 5-point response scale is assigned.

The overall score is therefore an average between the score from the Sabben questionnaire, the score from the Chauvet questionnaire and the score from the managers' perception.

### 3.7 Moving from assessment to valuation

The company director who has applied the method described in the previous two sections will have an initial map of his intangible assets, their importance and respective interdependencies, as well as points for attention and avenues for improvement (not necessarily financial). With a view to sale or transfer, the question of overall financial valuation may arise from the above assessment.

We can use several methods to move from rating to valuation. The Bercy Thesaurus (2012) used proxies and/or the cost of reconstruction. In the first case, the proxies used are based on pragmatic hypotheses to be verified, in the second case we quickly come up against a drawback. If the calculations are based on the past, to be convincing they require a great deal of time to gather information and compute. In the 2019 Thesaurus, a DCF-type method is used, weighed down by a series of coefficients whose usefulness needs to be demonstrated.

We have proposed an innovative approach (Antheaume and de Clarens, 2024) aimed at using the rating of intangible assets to determine the EBITDA ratio to be used to value a company. Very schematically, we postulated that within a group of comparable companies, which are subject to the same market constraints, there is a strong correlation between the quality of management and the EBITDA ratio. Therefore, instead of using the sector average, we will use the ratio that corresponds to the quality of management, which we have established from the rating of intangible assets.

#### **4. The case of alignment, a key cross-functional dimension**

It is quite possible for a company to show good social, environmental and financial performance without seeking the alignment that is the key to harmonious success. It is possible for all the assets to be rated positively without the company being able to create value. This depends on how the assets are aligned with each other. It is therefore important to check the consistency between practical values and operational trade-offs in order to obtain the full potential of the company's value creation through asset alignment.

##### 4.1 What alignment? A proposed interpretation

There is an abundance of interpretations of the concept of alignment.

First of all, there are a number of terms used to designate it, which reflect different interpretations: "*Strategic alignment has many pseudonyms. It is also termed fit (Porter, 1996), integration (Weill and Broadbent, 1998), bridge (Ciborra, 1997), harmony (Luftman et al., 1996), fusion (Smaczny, 2001) and linkage (Henderson and Venkatraman, 1989)*". (Avison et al., 2004)

There are also different contexts within the company where alignment is relevant. We need to distinguish between them. We have identified sustainability, information systems, strategy and processes as elements to be aligned (with each other, with profitability, etc.). We note that strategy, and therefore strategic alignment, is only one dimension among others. Let's focus more specifically on sustainability, which requires perfect alignment of all the company's activities.

The importance of alignment with sustainability is generally accepted, but recognised as difficult to achieve: "*Sustainability is an increasingly essential element of most company strategies (McKinsey, 2013); however, the formulation and implementation of operations strategies that embrace sustainability remain open issues. Specifically, companies encounter difficulties in aligning operations strategies with sustainability in terms of environmental and social goals and practices.*<sup>19</sup>" (Longoni and Cagliano, 2015). According to Sachs (Sachs and Sachs, 2021) who calls for corporate responsibility to achieve the SDGs and implement the Paris Climate Agreements, stakeholders must answer four questions: what does the company produce, what are the environmental and social impacts, how sustainable is the company's value

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<sup>19</sup> Sustainability is an increasingly essential element of most business strategies (McKinsey, 2013); however, the formulation and implementation of operating strategies that integrate sustainability remain open questions. Specifically, companies find it difficult to align their operational strategies with sustainability in terms of environmental and social objectives and practices.

chain and what is the external engagement with citizens, lawyers and communities, with a view to implementing actions towards sustainability. Assuming that sustainability is reducible to CSR, then the measurement of strategic alignment in terms of CSR must respect a level of coherence between the aims and approach and the resources, efficiency of resources and impact of the policy. (Bruna, 2020)

The concept of alignment and its repercussions are, in our view, an essential contribution to the valuation of intangible assets. Generally speaking, alignment consists of verifying that facts are in line with statements. *Measures that align everyone within the organization, with the intentions of the business and with the key goals of their respective departments, are needed to achieve strategic alignment, but there are no indicators as to what these measures might be*<sup>20</sup> (Labovitz and Rosansky, 1997; Galliers, 1991).

The term compliance could be used, or we could talk about the opposite of conflicting interests. "Indeed, in the interests of economic performance, firms are forced to respond to contradictory demands from multiple stakeholders... which can lead them to adopt hypocritical behaviour". (Meier, 2019). We will not enter into the ethical debate about organisational hypocrisy here, we will simply measure it, which in turn allows us to know whether it is intentional and conscious or not (Dumez, 2016). In practice, the measurement of alignment can be considered globally by contrasting two organisational models: silo-based or cross-functional. In silo mode, needs and interests often diverge between two silos. For example, a sales department would set objectives based on a method of increasing the number of contacts, while a CSR department would seek to improve the safety of sales staff and their carbon footprint.

Faced with this diversity of terms, situations of application and dimensions to be aligned, we propose a regulationist reading of the way in which alignment is achieved.

The regulationist approach (Friedberg, 1993), (Reynaud, 1988), (Brechet, 2017) will give us an indication of the way in which the rules set by one or other of the management teams may be modified over time. To approach the reality of regulations in the company, we compare the results proposed to managers in the ad hoc part of our questionnaire with the results of a survey containing the same questions, sent to managers and employees.

We also assume that strategic alignment must be measured between values and missions and the instructions actually given.

We also check the alignment of processes and routines, by analysing interactive, negotiated management and involvement procedures (Ingham et al., 2011) and through proximity relationships (Dupuy and Torre, 2004).

Alignment is also measured between stakeholders and IS. (Preston and Karahanna, 2009) or more generally between internal and external stakeholders (Venkatraman and Hendersson, 1993).

Since agility has been studied extensively in the IS field, the literature linking alignment and agility is dense, but the reasoning and models proposed can be extended to other intangible assets. "We theoretically develop the idea that IT architecture modularity helps sustain IT alignment by increasing IT agility, and that decentralization of IT governance strengthens this

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<sup>20</sup> "Achieving strategic alignment requires measures that align all members of the organisation with the intentions of the business and the key objectives of their respective departments, but there are no indicators of what these measures might be (Labovitz and Rosansky, 1997; Galliers, 1991)."

relationship. IT architecture therefore complements IT governance structure." <sup>21</sup> (Tiwana and Konsynski, 2010)

The relationship between the effects of alignment on performance is mediated by agility: "We also show that the effect of alignment on performance is fully mediated by agility, that environmental volatility positively moderates the link between agility and firm performance, and that agility has a greater impact on firm performance in more volatile markets" <sup>22</sup> (Tallon and Pinsonneault, 2011).

It also emerges from the literature that there is a strong dependency between agility and organisational performance "We have seen in this first chapter that agility and strategic alignment lead to greater organisational performance" (Barlette, 2016). Konsynski's model (Applegate et al., 1986) highlights agility as a mediator between I.T. architecture, I.T. governance and strategic alignment, while Wu's model studies the impact of I.T. governance, strategic alignment and organisational performance.

#### 4.2 Taxonomy of alignment

Based on the literature and pragmatic experience, we propose the following model as a contribution to the measurement of alignment:



Figure 10: Breakdown of capital alignment

The measurement of alignment is carried out in the same way as the valuation of human wealth, through questions in the general questionnaire, plus a survey, based on 25 questions, divided according to dimensions, sent to employees on the one hand and managers on the other. The final score is an average between the average of the surveys and the score of the general questionnaire.

<sup>21</sup> "We theoretically develop the idea that the modularity of the IT architecture helps to maintain IT alignment by increasing IT agility, and that the decentralisation of IT governance reinforces this relationship. The IT architecture therefore complements the IT governance structure".

<sup>22</sup> "We also show that the effect of alignment on performance is fully mediated by agility, that environmental volatility positively moderates the link between agility and firm performance, and that agility has a greater impact on firm performance in more volatile markets."

## 5. Using intangible assets as a management tool

Without going into detail about the information provided by our intangible asset rating application, we propose an analysis of the information provided and, within the Human/Organisational pillar, we take the example of the Relational asset, which can be represented as follows (the ratings are taken from a fictitious case)<sup>23</sup> :

Relationnel	managérial	16,00	0,04	16,64	13,15	13,80	9,91
	marketing R	8,00	0,04	8,32	6,57	7,07	
	compétences R	12,00	0,03	12,36	9,86	8,87	

NP: the table shows the raw scores in the first column, followed by the adjustment coefficients.

We can see that the score for relationship marketing is low. You can access the details of how the score was arrived at and look for the problem areas (which we have highlighted).

We can see that the average of the basic scores:  $(16+8+12)/3$  is correct, i.e. 12/20, but that the score for the Relationship Marketing sub-asset is 8/20. You can see the details of the score:

évaluez votre capacité d'écoute	14	managérial	16,00	12,00
évaluez votre expertise relationnelle	17,2			
évaluez votre capacité à vous adapter aux demandes	16			
vosre communication vous semble elle continue?	16,8	Marketing R	8,00	
évaluez la qualité et l'utilisation de votre CRM	6			
vosre marketing est-il individualisé?	8,8			
vosre centre d'appel client est il interne?	11			
vosre marketing est il focalisé sur les clients?	8,5	Compétences R	12,00	
les informations remontées par le marketing sont elles implémentées?	5,4			
avez-vous initié la sélection de clients clé?	9,3			
la relation client est elle gérée dans la durée?	7			
évaluez votre capacité à garder l'esprit ouvert , être à l'écoute, rester humble	9,7			
évaluez votre capacité à susciter la sympathie	10,2			
évaluez votre capacité à se mettre à l'écoute et se mobiliser	9,7			
évaluez votre capacité à concevoir la relation dans la durée	10,3			
évaluez votre capacité à créer un sentiment de confiance	17,6			
évaluez votre capacité à générer de la confiance	14,8			
évaluez votre capacité à construire une réputation	13,6			
évaluez la capacité des équipes à faire vivre les relations au quotidien	10,1			
les ressources dédiées aux relations sont elles bien organisées	12			

And note that some scores are very low (and therefore probably easy to improve).

On this basis, an action plan could be put in place, the impact of which would be measured using the same method as before, but which this time would give the following scores:

- Evaluate the quality and use of your CRM: 12/20
- Is the information provided by marketing implemented: 12.30/20
- Evaluate the ability of teams to foster relationships on a day-to-day basis: 11.70/20

In the case studied (fictitious), the calculation of EBITDA before the action plan gave a value of €250K and €282K after the action plan, taking into account the costs of the action and the observed evolution.

<sup>23</sup> The first score is that obtained from the questionnaire, the following columns are the adjustments linked to the sector, and other coefficients taken into account by the method.

At the same time, we can recalculate the overall score for intangible assets and use the new ratio to value the company. The difference between the two valuations will give us the true return on investment.

## **6. Conclusion**

We have highlighted the crucial importance of intangible assets and the need for managers and investors to have an in-depth understanding of the breakdown of goodwill. In response to this need, we are proposing an updated method based on the logic of the Bercy Thesaurus, adapted to contemporary issues and enhanced by advanced analysis and rating techniques.

Our method is based on three fundamental pillars - Financial, Human and Sustainability - each of which is deemed to be of equal and indissociable importance, making it impossible to offset them in the assessment. These pillars are subdivided into nine intangible assets assessed using specific questionnaires, and their interactions are weighted by influence coefficients. By adapting this assessment to the company's sector of activity, a tailor-made approach is possible. Assets are also influenced by 'cross-cutting dimensions' such as Agility, Risk and Resilience, complemented by a critical alignment dimension between declared policies and concrete actions. This dynamic provides a holistic and integrated view, essential for a fair and balanced appreciation of intangible values.

We make a clear distinction between valuation and appraisal, responding to the varied needs of different stakeholders. Agility, considered as a transversal dimension, influences all assets via a specific coefficient, illustrating its substantial impact on overall valuation. We have also defended the view that strategic alignment between the different dimensions of assets is a crucial vector of valuation.

Verifying this alignment is a major innovation, potentially offering a guarantee of fidelity and accuracy in the assessment results. This innovative process not only respects the complexity of organisational dynamics, but also ensures that the assessment reflects the company's operational and strategic reality more reliably.

We have also detailed the rating method for a cross-cutting asset, agility, whose effects are felt across all the other assets, which is taken into account by the influence coefficients used.

The various coefficients used are currently proposed by groups of experts, but it would be possible, once sufficient data is available, to carry out an analysis using the Bayesian network method and to corroborate or modify the coefficients. A project using this method is due to start in September 2024.

As well as verifying the coefficients, this project will include the implementation of a predictive dashboard, i.e. a tool that will make it possible to calculate a priori the impact on profitability of an improvement in the rating of one of the assets.

The valuation of intangible assets can also be represented by an extended version of the accounting documents, and it is possible to produce an "economic" package which would present the figures from the accounts, a column of adjustments relating to the valuation of intangible assets and an "economic value" column which would be the result of the previous two columns.

It also seems possible to us to make a link between the results we obtain and the extra-financial reporting obligations.

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## 8. Appendices

### Appendix 1

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### Appendix 2

(Arteta and Giachetti, 2004);(Venkatesan and Kumar, 2004); (Sharifi, 1999), (Sharifi and Zhang, 2001); (Tavani et al., 2014); (Werder et al., 2020); (Houdet et al., n.d.); (Venkatesan and Kumar, 2004); (Gill, 2015); (Ragin-Skorecka, 2016); (Wilson and Doz, 2011); (Fowler and Hughsmith, 2001); (Yang and Li, 2002); (Lin et al., 2006); (Haq and Boddu, 2017); (Yang and Liu, 2012); (Schuiling, 2014); (Tallon and Pinsonneault, 2011); (Eisenhardt and Martin, 2000); (Teece et al., 1997); (Sune, 2015); (Philips and Wright, 2009); (Mason-Jones et al., 2000); (Overby et al., 2006); (Trinh et al., 2012); (Xing et al., 2020); (Potter et al., 2015); (Teece, 2007); (Dyer and Shafer, n.d.); (Gong and Janssen, n.d.); (Felipe et al., 2017); (Charles, 2010); (Roberts and Grover, 2012); (Diegmann et al., 2018); (Womack et al., 1990); (Beck and Beedle, 2001); (Philips and Wright, 2009); (Goldsby et al., 2006); (Tsouveloudis and Valavanis, 2002); (Appelbaum et al., 2017); (Augier and Teece, 2008); (Charbonnier-Voirin, 2010); (Vokurka and Fliedner, 1998); (Adler, 2012); (Dove, 1994); (Martin-de-Castro et al., 2011); (Imache et al., n.d.)

### Appendix 3 The main taxonomies

Author	Capital	Dimensions
Sveiby (1986)	Individual skills	Ability to adapt and react Education Experience Values and social skills
	Internal structure	Patents Ideas Computer systems Administrative procedures Corporate culture Social and behavioural norms
	External structure	Customer and supplier relations Brands Reputation
Edvinsson (1991)	Structural capital	Information systems Culture and strategy Market positions Information sharing Quality and management philosophy Use of new technologies
	Human capital	Employee motivation and loyalty Level of initiative Willingness to learn Creativity

		Education Professional skills Cultural diversity Level of investment in human resources Know-how
	Customer capital	Customer relations Operational integration Values and behavioural norms Brands Customer loyalty Market penetration Distribution chains Contracts
Roos (1997)	Relationship capital	Brands Customers Distribution network Contracts Agreements Licences and franchises
	Human Capital	Expertise Problem-solving skills Leadership Management skills
	Innovation	Know-how Industrial secrets Patents and other rights
	Infrastructure	Technologies Organisation procedures Corporate culture Management methods Databases Information systems
Bontis (1998)	Human Capital	Knowledge capital Skills capital Motivational capital Capital tasks
	Structural Capital	
	Customer Capital	

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