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## **Figuring out IT markets:**

# **How and why industry analysts continuously launch, adjust and abandon categories**

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## **Abstract**

*Despite being a source of significant change, there has been little focus on how and why industry analysts constantly launch, adjust and abandon market-defining categories. To address this issue, we investigate the Big Three industry analyst firms and find that they promote categories clients find valuable and adjust or abandon those no longer attracting attention. Bringing together insights from information systems research and category scholarship, we show that industry analysts ensure their expertise is seen as relevant to clients through material and visual processes theorised as category-work, figuring-work, and client-mapping, which together create 'client-induced categories'. This novel theorisation throws light on the processes market intermediaries use to align categories with client concerns and how incorporating categories in graphical figurations can intensify the cycle of category creation and abandonment. It also enhances understanding of the dynamics surrounding transitory terminologies and opens up new research opportunities for studying IT markets.*

## **1. Introduction**

Market categories are important. In 1998, when the influential industry analyst firm Gartner launched the Enterprise Resource Planning (ERP) category, it heralded a new class of computer solution that set the market's direction for the next decade (Swanson, 2020). However, two years later, it would suddenly declare ERP dead and introduce its new ERP II category. Yet, a few months later, and somewhat surprisingly, Gartner would then withdraw the ERP II category (Bond et al., 2000). Similarly, in 2008, following Facebook and LinkedIn's launch, the same industry analyst firm would introduce the Social Software category. When Facebook released its Facebook at Work product, it added further sub-categories to Social Software, including Externally Facing Social Software (EFSS). However, Gartner would soon withdraw the newly introduced EFSS category (Mann, Drakos, & Gotta, 2016).

The introduction and then, shortly afterwards, adjustment or abandonment of a category has become a common feature of the information technology (IT) market. Characterised by extraordinary levels of technological change, industry analysts have emerged to help technology adopters make enough sense of the IT realm to take decisions (Pollock & Williams, 2011) and have launched several hundred market-defining categories over the last few decades alone (Pontikes & Kim, 2017). While some of these have endured for significant periods, many others enjoy a more fleeting existence (Wang, 2010), in some cases lasting just a few months (Pontikes & Kim, 2017).

There is a clear gap in information systems (IS) research concerning why a market intermediary like an industry analyst launches a category and adjusts or abandons it shortly after. When IS researchers and others discuss these ephemeral terminologies and classifications, they depict them as part of the rhetoric accompanying new technologies (Barrett, Heracleous &

Walsham 2013), as fads and fashions (Baskerville & Myers, 2009; Cram & Newell, 2016; Heusinkveld et al., 2021; Hirschheim, Murungi & Peña, 2012; Piazza & Abrahamson, 2020), or organising visions (Davidson, Østerlund & Flaherty, 2015; De Vaujany et al., 2013; Liao, 2016; Swanson & Ramiller, 1997; Wang, 2021). Yet, these broad-brush approaches tend to leave underspecified the complex topology of IT product markets and tell us little about what prompts this intermediary to permit and, in some cases, foster an ever-changing category system. However, understanding this ‘why’ is essential since even short-lived categories herald significant technological and market change (Wang, 2010).

To shed light on this puzzle, we turn to category research that has provided new insights into how market intermediaries categorise technologies (Durand, Granqvist & Tyllström, 2017). Scholars have begun asking the question of what spurs an intermediary to create a category in the first place (e.g., Delmestri, Wezel, Goodrick, & Washington, 2020; Durand & Khaire, 2017). However, there are still crucial gaps in this literature, particularly on the question of “how categories emerge and fall out of use” (Kennedy & Fiss, 2013, p. 1139). Specifically, the category literature has “overemphasised the stability of categories and the inertia of classificatory systems” (Durand & Paoletta, 2013, p. 1109), such that the mechanisms and forms of organisation within intermediaries that launch, modify and truncate the career of the category have not been thoroughly investigated (Kennedy & Fiss, 2013). This prompts our research questions: *How and why do intermediaries continuously introduce, adjust and abandon categories?*

In this paper, we address these questions by drawing on empirical evidence from a long-term, in-depth qualitative study of the Big Three industry analyst firms. Looking across these organisations, we acquire a window onto how they build and promote categories that clients find

helpful and then modify or abandon those that detract from this aim. Furthermore, we link IS research with developments in practice-based category discussions (Durand et al., 2017; Granqvist & Ritvala, 2016; Granqvist & Siltaoja, 2020). This allows us to show how industry analysts attempt to make their expertise relevant to client decisions through a set of material and visual processes, which we theorise as category-work, figuring-work and client-mapping. These together create ‘client-induced categories’, defined as temporary-probing mechanisms devised to help technology adopters navigate complex IT markets (Khair & Wadhvani, 2010).

These novel concepts allow us to integrate and build bridges between IS and category scholarship. First, while IS researchers have highlighted the importance of transitory terminologies and classifications (Swanson, 2010; Wang, 2021), we reveal, through adopting a categorisation lens (Durand, Granqvist & Tyllström, 2017), processes not sufficiently captured by existing concepts like organising visions (Davidson et al., 2015; Swanson & Ramiller 1997; Liao, 2016) and meet calls for attention to be given to “influential gatekeepers” who “patrol” category boundaries (Wang, 2021, p. 414). Second, we complement and extend category scholarship, which has “neglected processes of category emergence and dissolution” (Kennedy and Fiss, 2013: 1139), by identifying and explaining the processes through which intermediaries create, adjust, and abandon categories to meet their primary goal of delivering benefits to clients. Finally, we further develop the recent insight that the ‘visual’ imparts particular dynamics to category systems (Delmestri & Greenwood, 2016; Blanchet, 2018) by showing how incorporating a category in a graphical figuration can intensify the cycle of category creation, adjustment and abandonment.

## **2. Market intermediary priorities during category creation**

Market categories have been depicted as “disciplining standards” (Kennedy & Fiss, 2013, p. 1139). Defined as “devices that create order in markets” (Beckert & Musselin, 2013, p. 7), they channel how consumers search for and evaluate products (Lounsbury & Rao, 2004; Rosa et al., 1999). For instance, when an industry analyst issues a report on a new technological category, a buyer will use this to find and compare vendors (Pontikes & Kim, 2017). Consequently, because they guide adopters in deciding what and where to buy, vendors must consider (and perhaps even adapt to) categories to avoid illegitimacy discounts (Zuckerman, 1999). For instance, when Gartner introduced its ERP category, software vendors had little choice but to rebadge and redesign offerings under the ERP banner, as these solutions were sought by adopter organisations (Swanson, 2020). Alternatively, research has shown that if a vendor does not identify as part of a category, it could be “screened out” of consideration (Zuckerman, 1999, p. 1399). For instance, Pollock and Williams (2011) discuss the case of a software producer that failed to actively position itself in Gartner’s emerging customer relationship management (CRM) category and subsequently lost out in a procurement contest.

Technology vendors are especially keen to be included in categories produced by a market intermediary like an industry analyst, as these receive the most attention from technology buyers (Pontikes & Kim, 2017). Such intermediaries emerge to help technology adopters choose and evaluate complex products. Defined as neutral third parties (Aspers & Beckert, 2011), intermediaries are seen as having the necessary expertise and no stake or interest in market categories (Khaire, 2017). When an intermediary launches a new category, it is assumed that they are providing consumers with a comprehensive and inclusive picture of market offerings (Lounsbury & Rao, 2004; Rosa et al., 1995; Rosa, Judson & Porac, 2005). For instance,

Lounsbury and Rao (2004) hypothesise that an intermediary is spurred to launch a new category when “new entrants” flood into an area, therefore expanding the “variety of product models” and stretching the category boundary (p. 976).

In contrast, more recent work describes intermediaries as not passively reflecting markets (Lounsbury & Rao, 2004) but actively constituting them (Beunza & Garud, 2007; Carruthers & Stinchcombe, 1999). Evidence has emerged that shows that rather than provide complete pictures of vendor offerings, intermediaries gear categories around the decision-making concerns of clients (Kodeih, Bouchikhi & Gauthier, 2018). For instance, in her examination of film critics, Hsu (2006) provides evidence that intelligible categories are “awarded attention and legitimacy by consuming audiences” (p. 489). Similarly, Pontikes and Kim (2017) describe how because their clients “favour category clarity”, an industry analyst could “exclude a firm from a report” that “complicates their narrative” (p. 85).

Together, these studies support the idea that market intermediaries shape category systems around client concerns. However, the processes through which intermediaries use these concerns to construct categories remain poorly understood. For example, the creation of more selective or meaningful pictures (Hsu, 2006; Khaire, 2017) where producer developments are excluded (Pontikes & Kim, 2017), contrasts with previous assumptions that intermediaries built exhaustive knowledge of producer offerings (Carruthers & Stinchcombe, 1999; Lounsbury & Rao, 2004, Rosa et al., 1999; Rosa et al., 2005). Indeed, an intermediary’s decision to omit significant technological developments could appear an oversight, for which it could be challenged (Lounsbury & Rao, 2004; Navis & Glynn, 2010).

In this context, there are growing calls to study the more pragmatic circumstances surrounding category construction (Durand et al., 2017; Grodal & Kahl, 2017), including the

work practices and artefacts that produce categories (Blanchet, 2017). Indeed, while Pontikes and Kim (2017) note the specificity of industry analyst category formats, that, for instance, they are incorporated in ‘visual’ reports, they do not give this importance. However, it might be assumed that when the intermediary foregrounds client concerns, utilising figures will have some bearing on the categorisation process (Blanchet, 2017; Delmestri & Greenwood, 2016). Thus, to move forward, we must focus on the material and, specifically, visual processes intermediaries enact in the process of building categories that serve client requirements.

### **2.1. Material and visual processes for foregrounding client concerns**

For this purpose, we build on recent calls for research on what market intermediaries do when they categorise entities in markets (Durand et al., 2017) and aim to identify categories and categorisation processes (Kennedy & Fiss, 2013). While earlier research considered categories as “theoretical constructs” (Rosa et al., 1999, p. 64) or “conceptual tools” (Negro, Koçak & Hsu, 2010, p. 4), we build on later scholarship, which calls for practice-based investigations (Granqvist & Ritvala, 2016) that forge an understanding of the various “acts of categorisation” (Durand et al., 2017, p. 13). Early literature suggested that simply “listing products” (Lounsbury & Rao, 2004, p. 1974) were sufficient to spark a category system, but later contributions have described a more structured progression. For instance, Beckert and Musselin (2013, p. 2) describe categorisation as involving processes of framing (i.e., the “construction of categories to which goods can be allocated”), allocation (i.e., how particular goods are “defined as belonging to this category”), and discrimination (i.e., “the establishment of quality differences within a product category”).

However, the sociomaterial mechanisms underpinning categorisation processes (see Wagner et al., 2018) are still under researched. Such mechanisms include how categories are tied to material processes, directing our focus towards the visual character of schemata, a topic attracting increasing attention amongst category scholars (Blanchet, 2018; Delmestri & Greenwood, 2016). For example, Espeland and Stevens (1998) have shown how visualisations matter in related market processes like ‘commensuration’. Delmestri and Greenwood (2016) see “appearance” as part of a more extensive process of “visual framing”, which is crucial in the social valuation of a category (p. 34). Further studies of visualisation complement the category literature, which conceived category turnover as driven only by ‘linguistic’ (Vergne & Wry, 2014) or ‘discursive’ (Grodal & Kahl, 2017) interventions. Delmestri and Greenwood (2016) argue that the “persuasive rhetoric of visuals” may be more potent than the linguistic, as it provides for immediate kinds of visual apprehension (p. 34; see also Puyou & Quattrone, 2018). While these studies help us understand how figures persuade, they throw little light on our quest to uncover how intermediaries go about making categories more valuable to clients.

Taking our lead from the above studies, we can develop our initial research question further. First, if the market intermediary views its primary goal as to increase the value of categories for clients, what ‘categorisation acts’ (Durand et al., 2017) are involved? Second, to what extent are the resulting processes of material and visual display performing as constitutive elements in the construction of categories?

### **3. Research context**

We have inductively generated in-depth and longitudinal insights building on a study of industry analysts and focusing on their influence in the initial emergence and later development of

categories. Inductive approaches are uniquely suited to throwing light on issues of process where prior research is not available or sufficiently rich and detailed. Combined with longitudinal analysis, the in-depth exploration of processes can allow insights into how categories develop over their lifecycle (Granqvist & Ritvala, 2016).

### **3.1. Setting**

Industry analysts have developed immensely since their inception in the 1980s (Bernard & Gallupe, 2013; Pollock & Williams, 2011). The earliest analyst organisations started conducting market research and other quantitative research for technology vendors. Originating from a small group of specialist players in North America, there are, today, 1,000 firms around the world (Pollock & Williams, 2016). Our investigation encompassed the three leading analyst firms, Gartner, Forrester and IDC, which accounted for more than half of the total \$5bn estimated analyst market in 2020. Gartner is the largest, at least six times its nearest rivals, Forrester and IDC. Headquartered in Stamford, Connecticut, with offices worldwide, Gartner makes the bulk of its money by selling its research and services to more than 10,000 client companies. Forrester and IDC are based in Massachusetts, with multiple worldwide offices and thousands of client companies.

Industry analyst research is read and acted on by several key constituencies, including Chief Information Officers and IT procurement teams. The initial test for the technology adopter is to understand the changing business solution landscape and identify the most promising opportunities amongst the flow of proposals for organisational improvement. The challenge for the industry analyst firm is to reach this audience and demonstrate the value of their knowledge

outputs and advisory services in helping clients make practical choices. One way they do is through ‘categorising’ new technological phenomena.

### **3.2. Sources of data**

Prior studies of categories offer generalised accounts based on quantitative analysis or archival data that lack detailed empirical insights into how category systems come into being (Negro et al., 2010). To remedy this, and consistent with research strategies from qualitative studies (Czarniawska, 2007), we adopted a data collection strategy based on several rounds of semi-structured interviews, complementary ethnographic observations, and the collection of archival material.

#### **3.2.1. Interviews**

To understand how and why industry analysts construct, adjust and abandon categories, we conducted a total of 72 interviews. First, between 2009 and 2017, we conducted 38 semi-structured interviews, initially focusing our attention on Gartner analysts (24 interviews) and then complementing this focus by conducting interviews with IDC (nine interviews) and Forrester analysts (five interviews). These were unique interviews, except for one case where we interviewed the same Gartner analyst on three separate occasions over several years to understand his attempts at, and progress in, introducing new categories. Second, between 2014 and 2017, to help build a more nuanced understanding of categories, we conducted a further round of 20 interviews with those working in IT vendors who regularly dealt with industry analyst categories. Finally, to further round out our interpretations, we also interviewed 14

consultants working in agencies that advised IT vendors on how to understand and navigate industry analyst categories.

In deciding how many interviews to include in our sample, we were steered primarily by data saturation, concluding the interview stage only once we felt we no longer extended our understanding of analyst categorisation processes. Analyst interviews tended to be relatively short, lasting less than an hour. More than half of the discussions were conducted over the telephone and remainder face-to-face. All but two were recorded and transcribed. We have anonymised interviewee names, using letters as identifiers.

Our interview protocol had two parts. First, informants were invited to describe whether they had authored a category, how they went about it, and whether any obstacles were encountered. We specifically focused on the factors that influenced their decision to create different categories, segment existing ones, and abandon others. Second, we explored more general category creation processes within their firms and their associated outcomes. Our questions prompted factual material (e.g. what categories were created, when, and how long they lasted) and information about the objectives behind specific category interventions.

### **3.2.2. Observations**

Our evidence was supplemented with more than 300 hours of physical and virtual observation during a broader ethnographic study of industry analyst practices. The first author participated in meetings, conferences, conference calls, webinars and social events, where the analyst categories were directly discussed. Direct observation complemented the more focused data collection methods already described and allowed us to develop a thorough understanding of the industry analyst categories. A rich data source was the member organisation, the Institute for Industry

Analyst Relations (IIAR). IT vendors formed this organisation to lobby industry analysts about categories. Here we participated in private meetings where analysts presented and, in turn, were questioned by IT vendors. A further source was the Gartner conferences (three events) and Forrester seminars (two events), where we observed formal presentations and talked more informally with analysts during coffee and lunch breaks.

### **3.2.3. Archives**

Additional longitudinal data relating to periods preceding our direct involvement were gathered by accessing material from conferences, blogs, analyst reports and websites. The IIAR private archives included documents and minutes of past meetings, recordings of presentations and webinars stretching back several years on topics related to industry analyst categories.

### **3.3. Data analysis**

The data analysis process, initiated by the first author and subsequently independently verified by the second, began during the fieldwork. They wrote extended notes on each interview and observation period and coded the accumulating interviews and observation material based on *in vivo* phrases and terms (Van Maanen, 1989). These notes, which included quotations and data tables, exceeded 100 pages.

The authors subsequently analysed this rich body of data according to the inductive principles of grounded theorising (Glaser & Strauss, 1967). The data collection process progressed iteratively, starting from collecting first-order data until saturation and then proceeding progressively back and forth between data and theory to derive second-order constructs through constant comparison with related notions in the extant theory (Nag, Corley &

Gioia, 2007). This process led to develop a new framework that captures how categories were shaped around client concerns through material and visual practices.

In the first instance, we centred our analysis on understanding how industry analysts constructed categories. Following Durand and colleagues (2017), we searched for various ‘categorisation acts’. Drawing on Beckert and Musselin’s (2013) three-stage model of market category construction as a starting point, it transpired that informants, when talking about category construction, were referring to one of four distinct sets of processes that included fundamental dynamics as yet unreported in the literature). We labelled these ‘framing’, ‘allocating’, ‘discriminating’ and ‘figuring’. The term framing was derived from informant quotes such as ‘define the terminology’ and ‘put a box around’ the market. Allocating concerned how ‘analysts... pigeonhole into categories’ and vendors are ‘fitting to [the] category’. Discriminating was about the ‘criteria’ used to distinguish particular products and vendors and ‘compare apples against apples’. Finally, interviewees continuously discussed how categories were represented in figurations such as the ‘Magic Quadrant’, ‘Wave’ or ‘MarketScape’, which we labelled as figuring.

Second, as we progressed our analysis, aspects emerged that referred to processes that led the analysts over time to, for example, create, segment, and abandon a category. It became clear how the use of graphical figurations was vital. These processes included ‘depicting’, ‘splitting’ and ‘drawing in’. Quotes referring to depicting included how figurations were ‘cluttered’, ‘crowded’ and ‘unreadable’. Some quotes referred to what we coded with the field-inspired label splitting, where informants talked of the need for ‘splitting the category in two’. Our ethnographic observations drew our attention to the fact that this process was typical across analyst firms. A Forrester analyst described in a private meeting, for instance, how they routinely

allowed their Wave graph to influence their choice to ‘split a category’. When analysts discussed their reasons for modifying categories, it became clear that another critical factor was the need to keep ‘the customer in mind’ and ‘serve the client’. We thus coded these analyst references under the label ‘drawing in’ the client.

The third set of codes referred to four groups of processes related to how analysts sought to reflect client concerns, which we labelled ‘probing’, ‘cycling’, and ‘killing off’. In the first probing, our quotes highlighted a process whereby ‘specific customer requirements would... be reflected’ within categories. The second, cycling, came from the reflection by informants that to ‘draw 50 little markets’ was not ‘particularly useful’; thus, they sought innovative methods to get around this. In the third, the field-inspired label of killing off was coded from the quotes amongst informants that they should avoid creating categories where ‘clients don’t read them anymore’, and ‘the value of a category was very, very low’, meaning that ‘nobody [was] very interested’. Once more, the use of figurations featured heavily.

In the second phase of coding, *in vivo* entries were further compared against each other to develop a sense of variation within them and foreground emerging themes and interrelationships. As the links and interrelations between second-order categories became evident, we assigned these groupings clear labels that cast our insights at a more abstract level (Ryan & Bernard, 2003). This led us to code ‘category-work’ as to how analysts arrived at their categories. Simultaneously, ‘figuring-work’ and ‘client-mapping’ captured how they allowed graphic visualisations and clients’ concerns to pattern their work.

As these insights emerged, we revisited previous literature once more to compare and clarify our contributions, which finally led to identifying as our overarching theme of how industry analysts prioritise clients when constructing categories through the complementary

process of category-work, figuring-work, and client-mapping (see Table 1 for the final coding structure). Next, we report on the findings of our longitudinal study of industry analyst category work in the IT area.

**Table 1**

*Final Coding Structure*

First order	Second order	Overarching theme
<p>“Define the terminology”, “Puts a stake in the sand”, “Analysts do try to pigeonhole into categories”, “Puts a box around what [the analysts] consider a particular market”, “Fitting to your category”, “Define a measurable set of criteria”, “Compare apples against apples”, “Magic Quadrants”, “Forrester Waves”, “MarketScapes”</p>	<p>Category work: Framing Allocating Discriminating Figuring</p>	<p>How industry analysts prioritise clients through complementary processes of category-work, figuring-work, and client-mapping</p>
<p>“Getting too many vendors”, “When there is a 100 [vendors], that’s not very good for us”, “A little bit cluttered”, “Crowded”, “It is unreadable. It is just garbage. It is just a bunch of dots”, “Lumped in the middle”, “The good market”, “Rugby ball”, “The torpedo”, “The beautiful picture when you have gone down to about 20, 25 to 15, or 10”, “Split the category in two”</p>	<p>Figuring work: Depicting Splitting Drawing in</p>	
<p>“When there is 3 dots on it, it is meaningless”, “No market that can be evaluated here”, “We’re late. Go. Boom”, “Because specific customer requirements would not be reflected”, “Draw 50 little markets, but that isn’t particularly useful”, “Value is very, very low”, “The clients don’t read them anymore”, “Nobody is very interested”, “Old and dying”, “Retire”, “Kill off”</p>	<p>Client-mapping: Probing Cycling Killing off</p>	

## **4. Findings**

### **4.1. Helping clients understand the complex market of offerings**

Industry analyst informants from all three firms viewed their primary goal as creating categories to support and help their clients understand the complex market of offerings. In prioritising value categories given to clients, we found that industry analysts conducted three sets of processes. The first concerned how analysts constitute the market for offerings through category work. Therein processes are framing, allocating, discriminating and figuring.

#### **4.1.1. Framing: Defining an emerging technology**

*Framing* captures how analysts participate in helping define and develop a shared understanding of emerging innovation. The process starts when they seek to identify growing fields where their interventions, such as giving a name to a product market, help catalyse its formation. Framing interventions play a historical role here. As noted by an analyst discussing his firm's role in shaping the now well-established ERP category, "[We] sometimes define the terminology that gets used to describe a particular innovation. Many people claim ERP, but Gartner was one of the original players behind the ERP term and trying to make that more widespread in use" (AA, interview). In framing a competitive space, analysts conduct a particular category work. As another analyst described, "It puts a stake in the sand" (BB, interview). Thus, framing interventions help focus attention on a promising area and help mobilise the resources needed to develop and exploit that innovation. The same analyst continued, "[It] puts a box around what we consider a particular market, which we can then put revenue dollars around, market sizes

around, growth rates around” (BB, interview). Framing interventions also creates a space where another kind of category work can be undertaken; allocating.

#### **4.1.2. Allocating: Putting vendors into the new category**

At the next stage, specific vendors are *allocated* to the new category. One informant stated: “The role of analysis is to categorise things... analysts do try to pigeonhole into categories to understand where we cover, where we don’t cover, to some degree” (CC, webinar). A new category encourages a swarming of offerings in the early stages, with multiple vendors attempting to enter with diverse offerings. An analyst described how, as soon as a new category is created, vendors will approach them: “So vendors are coming now to us to present their offering. They say, “You know what, that’s very good, what you produced in terms of the description. We think that we are fitting to your category, and we want to participate [in] the next update” (DD, interview). Other analysts described similar processes: “Once you publish a report about a new sector that’s emerging and that it’s high growth, my God, the phone doesn’t stop” (EE, interview).

#### **4.1.3. Discriminating: Creating evaluation criteria for category entrance**

As time continues, an emerging category begins taking shape, and more and more solutions are developed. As further evidence becomes available about the effectiveness of these solutions, analysts establish tools to *discriminate* between different producer offerings in their category. One informant, reflecting on many years of experience as an analyst, discussed how: “In being able to compare apples against apples and understanding... whatever technologies are growing the fastest in which organisations, that’s critical to our base business” (BB, interview). In

discriminating between products, the idea is not merely to compare technologies but also to identify notable differences between vendors. To this end, analysts develop a set of evaluation criteria. As another analyst explained, she will: “Try and define a measurable set of criteria but also a reasonable number, so not too many. You might have five key criteria and various sub-criteria, maybe 25 or something in total” (FF, interview). The analyst plays around with these different approaches to achieve the kind of discrimination they think is helpful. As one analyst put it, “It’s not also just a matter of defining criteria, it’s also understanding, obviously, what can be measured, but also what will give... a degree of diversity” (FF, interview). The same analyst highlighted the problems that would arise if no such discrimination strategy was implemented: “It’s important that you get things that have a degree of diversity. It would be a fairly poor measurement if [all vendors] were ‘lumped in the middle’ because your measurements were not specific enough” (FF, interview). Through discriminating, analysts produce lists of vendors and ultimately figurations that enable technology buyers to select between the leading providers.

#### **4.1.4. Figuring: Incorporating categories in a graphical figuration**

*Figuring* the category is a decisive process in these contexts. Attached to many industry analyst categories is a graphical figuration. For example, Gartner produces its Magic Quadrant and Forrester and IDC author similar instruments, called the Forrester Wave and IDC MarketScape. These figurations further discriminate between vendors. For instance, the IDC MarketScape will rank vendors along two axes labelled capabilities and strategies and place vendors in one of four segments; leaders, niche vendors, contenders and participants. Those vendors set further to the right are seen to have comprehensive strategies, while those placed towards the top have a high capability. Vendors thus seek to ensure that their products are ‘up and to the right’.

## **4.2. Client friendly pictures lead to category segmentation**

The second set of processes we identified in our data captures creating figurations, theorised as figuring-work, which involves depicting, splitting, and drawing in.

### **4.2.1. Depicting: Creating figurations in a way that helps clients make decisions**

*Depicting*, primarily by creating figurations that told a story, was vital in helping the client towards a decision. Below we examine the circumstances in which these figurations are seen to be optimally designed to provide information that can assist clients in procurement decisions. Here, there is a lifecycle element in that the influence of figurations varies across different moments in the evolution of a category. In the early stages, when scores of vendors are attracted to a promising application field, there are too many vendors to draw a meaningful figuration. A figuration with two hundred vendors on it, an analyst told us, would be “unreadable” (GG, interview). Another analyst said: “If you look at the Magic Quadrant as it stands today... it can get a little bit cluttered, and... people have to spend a bit of time scrutinising it to read it” (HH, webinar). Later, when a field is mature, with some products prevailing, and where applications are well characterised, procurement becomes less uncertain, and there may ultimately be little need for a figuration.

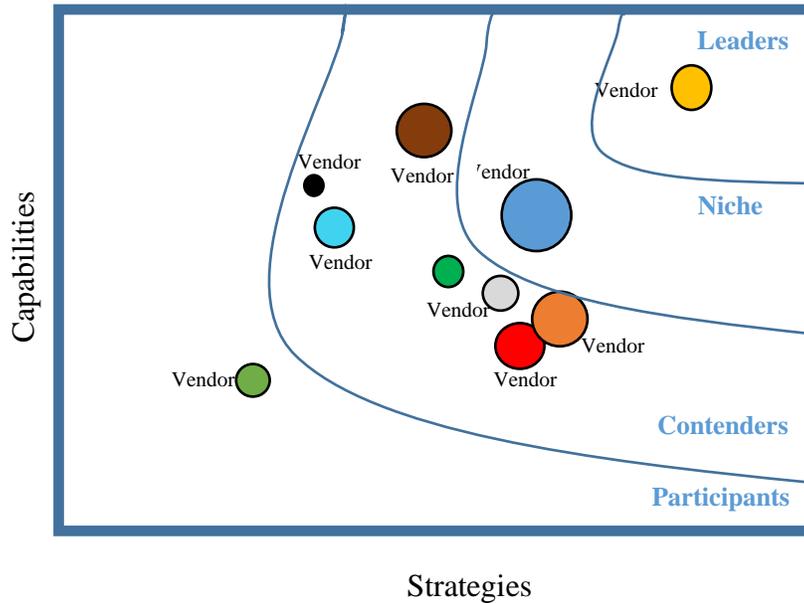
Over the years, however, analysts have recognised an ideal range or number of vendors that enhance the effectiveness of categories for clients. For example, according to analyst GG, the optimal number of dots on a Gartner Magic Quadrant was about 15 to 25. A similar heuristic existed surrounding the Forrester Wave, where they looked to have “10 to 12 vendors” (TP, internal meeting). Likewise, according to FF at IDC, MarketScape should contain around 10 to

15 vendors. An analyst described the rationale for why they sought to avoid ‘crowding’ on the figuration:

*By providing more relative space between [dots], it’s much easier to read and view and take a snapshot of which vendor is where. You can see clearly the dot positions, and you can actually see the distances and the deltas between the dots a little bit more (HH, webinar).*

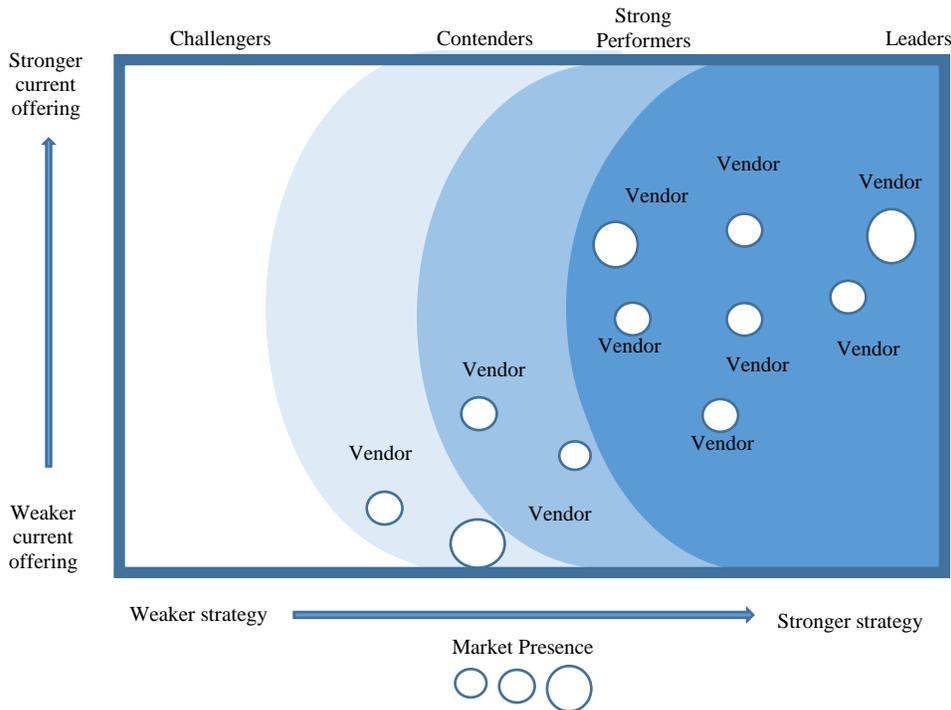
Analysts are guided not only by a number range; there is also a market picture drafted for directing categorisation work. Two types of market pictures enhance the category construction process. One analyst told us how, when constructing figurations, they wanted to capture the “good market” (FF, interview) and another how they sought “beautiful pictures” (GG, interview). The words ‘good’ and ‘beautiful’ were a framing mechanism that pointed towards producing figurations that were not so crowded as to confuse the client and not so sparse that they lacked complexity (see Figure 1). Additionally, it was necessary for the figuration to have a reasonable number of vendors and for there to be a clear message for the decisions faced by would-be adopters.

Figure 1: The ‘good market’ within the IDC MarketScape



There were also diagrammatic devices to enhance how vendors appear on a figuration. For instance, analysts sought to arrange vendors within Waves to create a “rugby ball” or “torpedo shape (GG, interview), which suggested a desire not just to fill the figuration randomly but also to discriminate between vendors in a way that gave it a structure: a torpedo meant vendors were not bunched within one part of the diagram (see Figure 2). Instead, there would be vendors with an even spread of capacities (e.g., challengers, contenders, strong performers, and leaders). In other words, the figurations were fashioned to allow analysts to create a set of ordered associations that helped guide clients, similar to how an artist leads a viewer’s eyes through a painting, which served to give the figuration significance so that the picture would indeed tell a story about the different capacities of vendors.

Figure 2: The ‘torpedo shape’ within the Forrester Wave



#### 4.2.2. Splitting: Segmenting the category

*Splitting* the category is where the analyst sought to manufacture the desired market picture. Our data show that these market pictures mattered a great deal. If the circumstances did not deliver them, analysts would actively attempt to create these pictures. For example, an analyst explains how he segmented a category when the Forrester Wave became “overly crowded” (DD, interview). He started by explaining what overly crowded meant: “We have more than 15 vendors in a category [which is a problem] because our Wave process cannot get a good representation in terms of positioning of those 15 vendors. [This is] more than 15, meaning 20, 30, 40 vendors in our graphic... so we are limiting [the Wave] to 15 vendors” (DD, interview). He then describes what limiting meant: “[When] we are getting too many vendors, which is the

case for one of the categories that I am studying currently... we are getting too many vendors, so, I decided, in that case, to split the category in two” (DD, interview).

To clarify, one might assume that if an analyst decides to split a category, notable differences have emerged between vendor products. However, this is not what is happening here. The analyst described how he sees this split emerging while showing that it is not easy to achieve in practice:

*I try to split [through] getting some products which are more for SMEs, small and mid-size rather than others which are more for [the] large enterprise. So, more a tactical choice in the first place or more strategic choice in the second category. But I am struggling anyway, just to share with you some of the problems* (DD, interview).

The analyst attempted to differentiate between products offered to smaller and larger vendors. Still, it is difficult to create two distinct categories because the vendors do not want to conform. He reported that after he created the split, he hoped vendors would offer products for both categories, but this did not happen and: “[Some] of the vendors want to participate in only one [category]” (DD, interview). Thus, the analyst wondered whether he should persist: “We are facing some problems of deciding how we should split or not split” (DD, interview).

Crucially, if the category split does not resolve itself organically, analysts have other means at their disposal to help encourage it. For example, the analyst could modify the category entrance criteria to include only those vendors who follow his lead and differentiate their products: “I try to limit [category entrance] to vendors who are participating in both [categories]” (DD, interview). The analyst continued: “[We decide] which are the most representative vendors in that category, and that’s our decision, so we have some sort of criteria to discriminate which one should participate, which one should not participate” (DD, interview). Of course, this begs

the question why industry analysts split categories in this way. To answer, we show how the basis of these categorisations revolves around efforts to draw in clients.

#### **4.2.3. Drawing in: Creating categories that enrol clients**

Analysts devise their categories to *draw in* those who buy and consume this research, specifically, their clients. Analysts were clear how, when categorising nascent fields, discriminating between vendors, and creating these market pictures, they were doing this for clients and not vendors: “We are an advocate for the end-user” (HH, interview). Another described how this imperative to bring value to their clients permeated everything they did: “If we try and look at the vendors and say ‘oh yes, let’s come up with a term’, it doesn’t work that way. Can’t work because you have not got the customer in mind” (GG, interview). Ensuring clients maintained their subscriptions was the immediate priority, requiring analysts to respond to queries and provide advice that offered practical help:

*If you have got the customer in mind, you are thinking what the customer wants to do is this, this, this, and this, and [if] that’s the direction everything is consolidating in, then we can name something. So, when push comes to shove, and there [are] deadlines to be met and customers are screaming at us and wanting something... you are going [to] go and serve the client (GG, interview).*

#### **4.3. Building categories around client concerns**

The third and final set of processes we identified in our data captures how industry analysts directly build categories around client concerns, theorised as client-mapping, which involves probing, cycling, and killing off.

#### 4.3.1. Probing: Launching and adjusting categories to understand client buying preferences

When categorising an emerging technology, the industry analyst must answer a fundamental question - how many categories to create? The difficulty is that they do not know how the technology will play out in the market: will it develop and sell as a broad 'suite' of solutions or fragment into many smaller, more specialised applications? They attempt to understand this through *probing* their client base. The industry analyst will launch an initial categorisation and probe for a reaction. Where this yields a negative response, it becomes the basis for further interventions such as adjusting or adding to a category. We investigate this further by examining Gartner's categorisation of CRM.

Gartner started with a single broad category – the 'CRM Suite' - but as an analyst describes, this did not last long: "Back in 2002, we had a CRM Suite [category, but] we got rid of it because it was mindless as far as we were concerned" (GG, interview). It was mindless because their probing revealed that clients were not interested in buying the broad CRM suite but only specialised applications:

*The problem was that nobody bought [a CRM suite]. 90% of our questions [from clients] were: "I want to buy a Marketing Campaign solution; what is this CRM Suite thing?" You go: "Well, most of it is irrelevant to you if you only want to buy a Marketing [campaign solution]". [Clients go] "Why don't you just tell me about the Campaign Management vendors?". [You go] "Well, you need these other vendors who are not on that Magic Quadrant". "Well then, what is the point in the Magic Quadrant?" the clients ask (GG, interview).*

Since it was recognised that the single categorisation was unhelpful, the analysts decided to segment CRM further to capture the areas where clients were spending money. The same analyst

describes how the CRM category went from one to 16 categories overnight: “[We] have 16 Magic Quadrants, [where] each one is describing a market” (GG, interview). How did they choose which 16 specific areas to cover? Again, probing the client base was key: these were “[t]he 16 [specialist applications] that we get most asked about [by clients]” (GG, interview).

Adjusting and augmenting categories based on client probing was an effective means to locate client purchase dynamics. Yet, it could create another problem - proliferating categories. Industry analysts must balance the need to inform clients of new developments whilst avoiding over-burdening them with too many market pictures. Presenting selective and meaningful pictures in highly dynamic areas like CRM is challenging, however, as there are constantly new specialist applications coming on stream about which clients need to know.

#### **4.3.2. Cycling: Moving between front and backroom categories**

Industry analysts sought to overcome the problem of overloading clients through an internal innovation: *cycling* between front and backroom categories. There were two aspects to this. The first was to identify a threshold number of categories that could be communicated publicly to clients. An analyst describes how hundreds of vendors continue to enter the CRM category: “[Most] people think [CRM] is all standardised on a few vendors, but we track 300 vendors, and we know that we don’t track them all” (GG, interview). As another analyst describes, however, they could not just continue to segment the CRM category as “the problem for the buyer then is...[y]ou’ve got these segments which are sub-segmented and sub-sub-segmented...which [sub-category] do [they] look in?” (II, interview). Since a separate analyst could own each category, the result would be that “[buyers] might have to speak to 8 different Gartner analysts to find out what they should be doing” (II, interview).

Therefore, when Gartner expanded the number of CRM categories, it calculated that this could be no more than '16'. These would become the categories published and communicated to clients and others. Yet, as analysts revealed, this 16 represents only a fraction of the market: "There [are a further] 48 sub-markets that we look at" (GG, interview). These 48 categories have similarities to the 16, but there is a significant difference. They are not communicated to clients the same way. Whereas the 16 are given publicity, the 48 are deliberately hidden from public view and catalogued internally – thus, we might think of the former as 'front room' and the latter as 'backroom' categories.

The second aspect, to ensure clients are kept abreast of changes, was that frontroom and backroom categories are not fixed but could be upgraded or downgraded. An analyst describes what caused an upgrading: "At least once every 18 months or so we kind of have a pow-wow, and we sit down like we are now to say, "This doesn't really quite work, does it, guys! Let's tweak it around a bit"" (GG, interview). The reason there is flexibility, he suggested:

*In the 48, there [are] three main [categories] - Campaign Management, Customer Care, and Sales Force Automation - and that represents 70% of packaged software spend in just three categories. So, the other 30% is split across the other 45 categories. So, they are much more smaller markets with 'nicher' players (GG, interview).*

He went on: "[It] is quite dynamic, so we watch those in... not as much detail as the big three, but we do, on some of them... pick them out and write the particular market where we know it has firmed up as a market; we know who the 20 players are" (GG, interview). The notion of 'firming up' and the number '20' are highly significant in these contexts. It means that the desired number of vendors has emerged for a Magic Quadrant to be drawn, and a meaningful

story could be told to the client about the category. This is also a trigger to tell the analyst that a frontroom category has emerged.

It is also possible that the reverse will happen; that is, some of the frontroom categories will be downgraded:

*For example, we're in a conversation that is going on this week, actually, where we will tweak around our 48, where we will probably create a couple, kill a couple, merge a couple of these sub-markets... We'll say, "these vendors are actually sort of competing against each other all the time", so we'll put those two little sub-markets together, and this group over here, really that is not a very good way of viewing it, so we have to be quite flexible (GG, interview).*

We have shown how industry analysts constantly cycled between what might be thought of as front and backroom categories when client-buying patterns were found to be moving in a different direction. In the next section, we delve further into how and why an industry analyst might downgrade or abandon a category.

#### **4.3.3. Killing off: Abandoning categories that no longer offer client value**

Our informants identified the factors that encouraged industry analysts to introduce and then – at times - *kill off* categories. These actors gear their research processes to determine areas where something is changing. One analyst told us: “We try to identify the future of [the] market rather than the past of the market” (DD, interview). They must sustain the perception, as another analyst stated that, “We are always ahead of you, we are always more on the button about what is going on in our area” (GG, interview). As another analyst saw it,

*from a commercial point of view, [industry analysts] are incentivised to keep [adjusting categories], and the problem is that you get to a point where you have named everything: What do you do? You have to rename it. And that is what you find more and more (II, interview).*

Analysts can be damaged if they miss a significant trend or arrive in an area that a rival has already framed. It is common, however, for analysts to propose a category too prematurely that does not take off. Washouts are an inevitable aspect of their category work: “We sort of take for granted that we are going to be wrong” (JJ, interview). It might seem safer to wait until patterns are more evident, but this would run the risk of allowing others to take the initiative – such as a competitor analyst organisation or consultant. For instance, an analyst recounted the story of how an industry analyst firm attempted - prematurely in his view – to modify the ‘Software Oriented Architecture’ (SOA) category. This caused “a bit of a backlash” (II, interview) amongst the client base, forcing the abandonment of the new category:

*[The analyst firm] attempt[ed] to define a new trend, not to uncover a new trend but to define a new trend - and I use my words quite carefully - which they called SOA 2.0. So, the idea was everyone out there in the industry, you’ve heard of SOA, you love SOA, but now we’ve got this thing called SOA 2.0, which is blah, blah, blah... (II, interview).*

Surprisingly, analysts can sometimes kill off categories unintentionally - as a simple consequence of creating a category. For instance, an informant describes the process an analyst went through when introducing the ‘Work-Force Optimisation’ (WFO) category and how this led to other more established categories becoming redundant:

*A colleague of mine...came up with the term WFO – Work-Force Optimisations. What he was picturing, and was quite right, was that there [were] four markets consolidating...*

*And all he was pointing out was, look at these different vendors, they were all aiming for the same thing...So he coined that term, but in doing that, he killed three other terms that were submarkets (GG, interview).*

Analysts can also be damaged if they retain for too long a category that becomes uninteresting for clients. Areas of technology opportunity will, for various reasons, become exhausted. How would the analysts know in practice when a category is in decline? A category could be killed off when the allocated vendors drop below a specific number:

*Because if [the market picture] drops to five dots, there's five vendors in this market, it's highly consolidated, so why would [clients] ring us? So, for example, Operating Systems, what's the point of having a Magic Quadrant for Operating Systems? Let's take Operating Systems on Desktop PCs... there is about three or four. It is a religious war... Likewise, another one is Desktop Productivity Applications. We used to have [a category] for that back in '94, '95. Once Microsoft killed everybody, we just dropped them (GG, interview).*

Falling numbers of vendors in a category is a problem because “[w]here you have got down to just a handful like five vendors in a market” there is no longer a “market that can be evaluated here” (GG, interview). This would mean there would be little distinction between vendors, and the category would struggle to maintain a community of interest. Critically, if there is no longer a meaningful story to be told to clients, why would they ring the analysts? Client disinterest would be the final nail in the coffin, and the category would be killed off.

## 5. Discussion

In addressing how and why industry analysts foster an ever-changing category cycle, we find that they want to ensure their expertise is seen as relevant to client decisions. Bringing together insights from IS research and category scholarship and studying the Big Three industry analyst firms, we find analysts create and maintain categories clients find valuable and adjust or abandon those no longer attracting attention. Furthermore, by deploying a practice-based category focus (Blanchet, 2018; Durand et al., 2017; Granqvist & Ritvala, 2016), we show that analysts maintain a category system that seeks to engage clients through category-work, figuring-work, and client-mapping.

Category-work consists of framing, allocating, discriminating, and, by extending Beckert and Musselin's (2013) framework, figuring (i.e., creating a graphical figuration). Figuring-work reveals the constitutive elements of these figurations where the intermediary splits (i.e., segments) a category to allow the drawing of market pictures that told the client a story. Client-mapping is where the intermediary probes for buyer preferences where they would cycle between frontroom and backroom categories and adjust or abandon categories no longer attracting client attention (see Table 2 for a summary of our findings). Together, these processes produce 'client-induced categories', defined as temporary-probing mechanisms devised to help technology adopters navigate complex IT markets.

**Table 2**  
Summary of findings

Process definition	Example quotes	Implications for category change
<p><b>Process 1: Category-work</b></p> <ul style="list-style-type: none"> <li>• <i>Framing</i> an emerging technology through giving it a name</li> <li>• <i>Allocating</i> vendors to the new category</li> <li>• Discriminating between vendors in the category</li> <li>• <i>Figuring</i> the category through incorporating it in a graphical figuration</li> </ul>	<p>“[We] sometimes define the terminology that gets used to describe a particular innovation. Many people claim ERP, but Gartner was one of the original players behind the ERP term and trying to make that more widespread in use”</p>	<p>Analysts attempt to constantly detect and categorise new technological developments to help their clients understand technical change, which include identifying and ranking major vendors in the category</p>
<p><b>Process 2: Figuring-work</b></p> <ul style="list-style-type: none"> <li>• <i>Depicting</i> figurations in a way that helps clients make decisions</li> <li>• <i>Splitting</i> categories when figurations become overcrowded</li> <li>• <i>Drawing in</i> clients when creating categories</li> </ul>	<p>“[When] we are getting too many vendors, which is the case for one of the categories that I am studying currently... we are getting too many vendors, so, I decided, in that case, to split the category in two”</p>	<p>Analysts sought to make categories understandable for clients by incorporating them in graphical figures, which included splitting categories to allow more meaningful market pictures to be drawn</p>
<p><b>Process 3: Client-mapping</b></p> <ul style="list-style-type: none"> <li>• <i>Probing</i> the client base to see if a category intervention is helpful</li> <li>• <i>Cycling</i> between categories that are more/less of interest to clients</li> <li>• <i>Killing off</i> categories no longer attracting client attention</li> </ul>	<p>“Because if [the market picture] drops to five dots, there’s five vendors in this market, it’s highly consolidated, so why would [clients] ring us? So, for example, Operating Systems, what’s the point of having a Magic Quadrant for Operating Systems?”</p>	<p>Analysts would ‘frontroom’ categories that clients appeared most interested in and ‘backroom’ or abandoned those receiving less attention</p>

The client-induced category should capture how the intermediary attempts to make things easier for its clients by providing them with selective and meaningful market pictures (Hsu, 2006; Pontikes & Kim, 2017). Although one might imagine that categories are created on their own terms – i.e. separate from consumption – this notion captures how the intermediary introduce or adjust categories to enable technology buyers to make sense of the market of offerings. We thus depict these categories as shaped by the dynamics of consumption. This conception differs markedly from the accounts offered by Lounsbury and Rao (2004) and Rosa et al. (2005), for instance, who see intermediaries as creating categories that are comprehensive and inclusive of innovation.

Even though client-induced categories can be short-lived, this does not mean they are insignificant. Here we build on Kennedy and Fiss (2013), who argue that regardless of whether

categories endure and become “disciplining standards”, they still shape “social realities” (p. 1139). We throw new light on how client-induced categories constitute IT markets. For instance, our study revealed that when there are many vendors in up-and-coming application areas, the intermediary will ‘split’ the category to allow meaningful market pictures to be drawn. In other words, we show that categories can be segmented not just because notable differences have emerged between vendor technologies but also to attract and capture clients (Cochoy & Venn, 2007).

Finally, building on Khaire and Wadhvani (2010), the concept should capture how category emergence is “not always followed by stabilisation” as client-induced categories endure only as long as they provide utility for primary audiences (p. 1283). After a short period, many of the categories no longer seem to achieve the same level of purchase with intended audiences. When this happens, the intermediary will either backroom or abandon the category.

Below we articulate how this theorisation of client-induced categories allows us to integrate and build bridges between IS and category scholarship and open up new research opportunities for studying IT markets.

## **5.2. Contributions to IS research**

Few markets are as dynamic as that for IT solutions (Chiasson & Davidson, 2005). It seems that there is an almost continuous flow of new terminologies and classifications (Swanson & Ramiller, 1997). We contribute to this conversation by incorporating insights from category scholarship into our understanding of how the IT market is constituted by “relatively transitory collective beliefs” (Abrahamson & Fairchild, 1999, p. 709). IS scholars and others have usefully theorised transient terminologies as ‘organising visions’ (Davidson et al., 2015; De Vaujany et

al., 2013; Liao, 2016; Swanson & Ramiller 1997; Wang, 2021), defined as a “focal community idea for the application of information technology in organisations” (Swanson & Ramiller, 1997, p. 460). While some (e.g. Wang, 2021) conceptualise the industry analyst categories described here as the same or similar to organising visions, we think it essential to differentiate these concepts as the former reveals processes not captured by the latter. Industry analyst categories are not generic visions that attract and orient diverse players in forming new technological areas in the way organising visions do. Instead, they are knowledge products that (re)make product-market boundaries as part of outputs designed to inform the actions and decisions of technology buyers. Our identification and theorisation of client-induced categories, therefore, articulate mechanisms not fully accounted for by existing concepts. We thus echo and give a new direction to the call by De Vaujany and colleagues (2013) to bring the abstract study of organising visions down to earth by showing how they relate to the concrete operation of markets and innovation alongside and in tandem with categorisation work, inviting further study of how the IT industry is constituted through the enactment of client-induced categories.

We consider the insights offered here necessary, not only because we identify the different dynamics underpinning client-induced categories but also because doing so deepens our understanding of how intermediaries influence IT markets. Research in this space has usefully characterised organising visions as having “a career”, where many struggle to gain ascendancy before eventually being displaced (Ramiller & Swanson 2003, p. 13). However, scholars have been less effective at explaining why specific organising visions take hold and others fade away (Liao, 2015; Wang, 2015). Our category lens suggests that scholars in this area have left underspecified the complex topology of IT product markets and not given sufficient weight to the emergence of intermediaries like industry analysts who exercise increasing influence over

transient terminologies. The concept of the client-induced category moves this form of analysis forward and also responds to calls for more attention to be given to the role of “influential gatekeepers” who “patrol” category boundaries (Wang, 2021, p. 414).

### **5.3. Contributions to category scholarship**

Our study further contributes by throwing light on a key but understudied question in the category literature: how and why “categories emerge and fall out of use” (Kennedy & Fiss, 2013, p. 1139). We identify and explain how this market intermediary creates, adjusts, and abandons categories and how this relates to their primary goal of delivering benefits to clients. Moreover, our study offers empirical depth and nuance to this conversation by revealing the different processes that shape industry analysts’ course of action. For instance, in theorising the notion of client-induced category, we build on the suggestion by Pontikes and Kim (2017) that what matters to the intermediary is to provide clients with categories that they find valuable such that they will eliminate information and develop specific methods to manipulate categories. While offering a point of departure for our study, we also provide a more nuanced theorisation of how and why intermediaries might conduct these kinds of interventions, including revealing aspects that contrasts with Pontikes and Kim’s (2017) analysis. For instance, we find that the intermediary does not simply omit data during category creation, as they suggest, as this may appear as an oversight for which they could be challenged by clients and others (Lounsbury & Rao, 2004; Navis & Glynn, 2010). Instead, it operates a more dynamic system where new vendor developments and technologies were accounted for in further layers of the intermediary organisation and where specific categories were front and back roomed as client interests and buying patterns dictated.

Our final contribution is to show how incorporating a category in a graphical figuration intensifies this cycle of category creation, adjustment and abandonment. In our study, client-induced categories are linguistic, material and, most importantly, visual. We reveal how attempts by the intermediary to create market pictures that told a story for clients became a powerful mechanism shaping the creation and abandonment of a category. The category literature has not seriously examined how categories and graphic figurations interrelate and whether figurations might impart different dynamics to category systems. For instance, category scholarship suggests it is shifts in ‘linguistic’ (Navis & Glynn, 2010) and ‘discursive’ (Grodal & Kahl, 2017) frames that intensify the cycle of the generation and exhaustion of categories (see also Granqvist & Siltaoja, 2020). However, because in the contexts described in this article, the picturing of a category is seen to draw in an audience in ways that linguistic formats do not (Delmestri & Greenwood, 2016), some categories might be considered ‘prelinguistic’ (Comi & Whyte, 2018). Further understanding of how a category develops through incorporation in a graphical figuration is essential because emergence through a market picture chronologically precedes linguistic developments, such as through a new terminology (Comi & Whyte, 2018).

#### **5.4. New research opportunities for studying IT markets**

The dynamics of IT markets take on a new hue when seen through a category lens, especially the notion of a client-induced category. Some assume it is simply innovation in technology vendors that intensifies the cycle of generation and exhaustion of categories (Kohli & Melville, 2019). However, our research reveals that this cycle is also a product of the intermediary category system. Our study invites future research to explore how the intermediary process of introducing, adjusting and abandoning a category evolves. For instance, as recent research indicates (e.g.,

Pontikes & Kim, 2017), the life span of the categories described in this article is short - and getting shorter all the time. The interval between the industry analyst introducing and then adjusting or abandoning a category is diminishing from cycles measured in years to cycles measured in months, and future research might investigate why this is the case. For instance, one conjecture worth exploring is whether this faster category turnover results from the emergence of new industry analyst firms (Pollock & Williams, 2016), forcing the Big Three to compete more aggressively for the attention of audiences through launching evermore distinctive forms of categorisation (Bessy & Chauvin, 2013).

Further research is needed on the implications for technology vendors when categories are back roomed or abandoned. For instance, Pontikes and Kim (2017) write that technology vendors have much to gain from becoming a ‘category king’, that is to say, dominating an industry analyst category. In that case, it follows that the outcomes for a vendor are probably significant if an industry analyst decides to discontinue that category. Brandtner (2017), for instance, has written about the potential for powerful incumbents to suffer “status anxiety” when there is no longer the same certainty about its category, as it will not be apparent “who is on top of the status order” (p. 214).

Scholars could investigate whether client-induced categories have political ramifications (Bowker & Star, 2000) or whether they disrupt traditional kinds of entrenchment (Durand & Khaire, 2017). For instance, it is widely thought intermediaries are “receptive to the interests of powerful incumbents”, such that they avoid “category reconstitution if a category was dominated by a few incumbents” (Lounsbury & Rao, 2004, p. 991). Evidence presented here, however, indicates that the intermediary would no longer promote (and could even abandon) a category dominated by a few powerful incumbents, as it would be perceived as offering little value to its

clients. Future research, therefore, might seek to understand whether client-induced categories act for or against influential vendors with entrenched product markets and if this invites hostility or resistance. It could also investigate whether these categories lead to a potential reordering of the composition and structure of markets, for instance, by killing off the competition between established vendors (Arora-Jonsson et al., 2020) or generating opportunities for other vendors to enter a category (Durand & Khaire, 2017).

Finally, a further potential theme for development concerns how a focus on the socio-materiality of categories can be revealing. We found striking, for instance, that seemingly important questions – when has a market emerged? - were prompted or settled through ‘small’ graphic props (e.g. analysts felt justified in launching a new category when there were 15 to 25 dots in a figuration), an insight that echoes research by McKendrick et al. (2003) on the number of vendors required before an area is recognised as a legitimate market. Similar issues arise as to when a category should be abandoned (e.g. less than ‘five’ dots). This offers the ‘paper trail’ sought by Grodal and Kahl (2017) to study category decay, inviting further studies of how the competitive space is constituted through the material and visual enactment of categories.

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