

Exploring the dynamics of organisational change: the case of sustainable purchasing

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Abstract

Much emphasis has been placed of late on the notion of sustainability as seen from a purchasing perspective and its integration into purchasing strategy. Little attention however has been devoted to the organizational aspects related to the emergence of responsible purchasing inside the firm. What factors initiate the adoption of a responsible purchasing strategy? What different stages may be identified over time and what explanatory factors conditioning both the form of organization adopted and the outcomes? What factors internal to the firm hinder the adoption and success of a responsible purchasing strategy? In this paper we address these issues shaping the initial design of our theory-building research on the constructs proposed in an evolutionary model of the purchasing function in the firm. The data focuses on a single in-depth case analysis of a major passenger and freight transport company, tracing the process of sustainable purchasing development back from the time of inception. This data is the result of company documents collection and in-depth interviews with more than 20 respondents within the firm, of different origins and involved to a greater or lesser degree with the sustainable purchasing initiative and operations. Results and subsequent discussion relate on theory building of a stage framework of sustainable purchasing emergence obtained from the iterative comparison between the data and constructs so that sharper and appropriate conceptual definitions and explanatory variables are provided with related discussion as to managerial consequences for the firm.

Keywords: sustainable procurement, responsible purchasing, purchasing function organization, maturity model.

Introduction

Committing to a sustainable development policy calls for a cross-functional process involving all functions in the firm. Such a policy is a long-term issue which seems to lend itself to a continuous development process as opposed to one of imposed radical change.

Purchasing is one functional area of the firm that occupies a key position in this process, acting at the interface between production and marketing, from an internal perspective, and between supply and demand from an external perspective. Moreover, the purchasing function – with a key role to optimize access of appropriate outside resources in pursuance of the firm's strategy - is directly involved in contributing to the effectiveness and competitiveness of the firm (Watts et al., 1995). In such a context, it is easy to understand the effects that the setting up of a responsible purchasing function will have on the vision and methods and practices of purchasing managers, and the purchasing function in general.

This article, via analysis of a single in-depth case study, targets an improved understanding of the responsible purchasing function in the firm. It aims at identifying successive stages of development to date, in the target organization, of the responsible purchasing function and improving our understanding of the reasons for this evolution. The identified successive stages start with that of an inexistent function, through that of an unstructured function evolving in parallel to the purchasing function, to that – today - of a function explicitly integrated into the purchasing function, though full integration has not yet been achieved.

The improvements and adjustments progressively made to the responsible purchasing function over time are highlighted, along with the way in which this impacts on the firm's purchasing function overall.

The data has been collected via a series of in-depth qualitative interviews with respondents at various hierarchical levels within the purchasing and responsible purchasing functions. Limitations relate to the relative exclusion of interviews with staff outside the purchasing function. Content analysis was then implemented with a view to identifying stages in the process and factors favoring and hindering the process of adoption of a responsible purchasing strategy and organisation.

Literature review: an “organisational” void

Much attention has been devoted so far to external to the firm conditions favoring the adoption of sustainable purchasing, with few studies specifically addressing the role of internal organization and resources (Pulraj, 2011). Yet some authors have suggested that organizational aspects may have an impact on sustainable purchasing adoption. Carter and Carter (1998) have firstly pointed out that capabilities within the firm - particularly the coordination between function at the inbound and the outbound side – would facilitate environmental purchasing. Also, Harwood and Humby (2008) and Giunipero et al. (2012), reveal the relevance of organizational aspects in hampering sustainable sourcing development (e.g. cultural inertia, information integrity and availability, obsolescence of measurement systems, involvement/support of top management, conflicting objectives and resources allocation). Moreover, Pulraj (2011) confirms the conclusions attained by other researchers (Bowen et al. 2001; Cousins, Lamming and Bowen 2004), that a strategically oriented purchasing function represents a necessary prerequisite for supporting sustainable supply management.

Despite the fact that the studies mentioned above have pointed out that organizational features of the purchasing function and especially its strategic orientation can be determinant for the adoption of sustainable purchasing practices, to our knowledge little or no literature exists focusing specifically on organisational aspects of responsible purchasing. Additionally, most of the extant researches have adopted a limited approach to sustainability, mainly addressing its environmental aspects (e.g. Carter and Carter, 1998; Pulraj, 2011).

Organizing for purchasing: insight from models on organizational maturity

Several references exist relating to organisational maturity and specifically maturity of the purchasing function of the firm. This emerged alongside the realisation that the purchasing function has increasingly been seen as a strategic function in the firm.

In particular in the literature several texts can be identified describing the dynamics and evolution of the purchasing function, and accompanying organisational characteristics. Reck and Long (1988) can be considered as forerunners in the area. They develop the concept of maturity and maturation of the purchasing function, taking inspiration from the model developed by Wheelwright and Hayes (1985) applied to the area of manufacturing. Their ideas have since been picked up upon and applied to the area of global sourcing (see Monczka et al., 2010) and Supply chain management. Models such as that developed by Reck and Long find interest both in the purchasing literature (Van Weele, 2010; Bruel, 2007), then, but also act as important cornerstones for purchasing practitioners (Potage, 1998).

The purchasing maturity models elaborated by Reck and Long (1988), Van Weele (2010) and Bruel (2007) are only few examples of the many frameworks elaborated in the academic and professional contexts. Schiele (2007) drawing on a review of these different proposals along with many others existent in literature, has elaborated a management oriented maturity model, which is the first resulting from a synthesis of theories and also empirically tested (p. 275). Starting from the consideration that the purchasing function is completely mature when it assumes strategic relevance inside the company, the author goes on to suggest that the dimensions qualifying purchasing maturity can be defined in relation to the classical managerial functions of planning, organisation (divided into structural and process organisation), leadership and control (p. 276). He thus proposes a five-dimensional maturity profile and a four stages maturity model.

The five dimensions identified include: (1) procurement planning, which refers to the existence of different typologies of procurement planning such as demand planning, pooling planning, environment scan and innovation planning; (2) the structural organisation of the purchasing function, referring to structure and mandates of purchasing and purchasing's strategic integration; (3) process organisation and purchasing's embeddedness in the firm, assessing the existence of a defined and related supplier selection, evaluation and development processes, as well as purchasing's early involvement in the development process, early supplier involvement and cross-functional sourcing strategy involvement of purchasing with other functions; (4) established human resource systems and leadership models in procurement, that is establishing job descriptions and requirement profiles, procedures for recruiting purchasing personnel and integrating new staff and mechanisms for performance appraisal and career development; (5) purchasing controlling structures, including the analysis of the controlling system, of processes and structures in place and methods and tools used to support purchasing controlling.

Maturity for each dimension is assessed depending on the existence of: a particular best-practice activity/tool/method within the organisation (Stage 1); a position or person assigned to perform the task (Stage 2); a clear definition of the process for completing the task, documented as well as applied (Stage 3); a cross-functional integration in the company is assured while basic requirements are met (Stage 4).

Research method

Research design

The aim of this paper is to develop a theoretical framework capable of describing from an organisational standpoint the emergence and development of sustainable purchasing inside the firm. With this aim, as from Eisenhardt (1989), we have initially referred to some a priori specification of constructs in relevant literature to delineate our design of the research. Therefore, through subsequent comparisons of fieldwork data with theoretical premises we have built our own framework adapted to answer our initial research question.

In this vein, the variables of purchasing maturity provided by Schiele (2007) have guided the construction of our data collection protocols. In order to identify first theoretically sound variables' definitions to look for during our data collection, we have read the sustainable purchasing literature through the lenses of Schiele's model (Table 1).

Table 1. Organizational variables of Sustainable Purchasing maturity as per Schiele (2007) and an interpretation of literature on Sustainable Purchasing.

Organizational dimensions	Research questions for analysis	Variables identified in extant literature	Authors	Insights
Planning	To what degree is purchasing involved in analyzing & integrating: <ul style="list-style-type: none"> - the internal demand/ requirements for sustainable inputs - the supply market in terms of sustainable offer (innovations, dynamics) 	Responsiveness to regulation and stakeholders demand to avoid risks Incorporate risk management into the decision-making process	Foerstl et al. 2010 Harwood and Humby, 2008;	<ul style="list-style-type: none"> ✓ Responsiveness to stakeholders' demand ✓ Sustainability risk management
Organisational structure	Is a sustainable purchasing organization established (dedicated purchasers, or units)? Are roles & responsibilities defined? Is sustainable procurement supported at top management level?	Liaison between purchasing and other functions Top management initiatives Reward mechanisms	Bowen et al., 2001 Shneider, 2012; Bowen et al., 2001; Harwood and Humby, 2008; Paulraj, 2011; Giunipero et al., 2012 Harwood and Humby, 2008;	<ul style="list-style-type: none"> ✓ Functional Interfacing and Integration ✓ Top management commitment ✓ Reward mechanisms to support sustainable purchasing

Process organisation	How sustainable purchasing is integrated in supplier relationship management in particular concerning: supplier sourcing, selection, evaluation, development & early involvement.	Detailed purchasing process and procedures Suppliers selection, Purchasing portfolio “Partnering” approach with suppliers/Managing suppliers	Bowen et al. 2001; Dai & Blackhurst, 2012; Pagell et al. 2010; Reuter et al. 2010; Handfield et al. 2001 Bowen et al. 2001; Carter & Carter, 1998; Pulraj, 2011	✓ Dedicated process and procedures ✓ Supplier evaluation based on both economic and non-economic criteria ✓ Suppliers as partners
Human resources & leading	In what respect is sustainable purchasing integrated into the HR policy concerning recruitment, job descriptions, performance appraisal; competence development etc...	Knowledge of environmental issues Technical skills of purchasing personnel Enviropreneurial orientation	Bowen et al., 2001; Giunipero et al., 2012; Harwood and Humby, 2008 Bowen et al., 2001; Pulraj, 2011, Bowen et al., 2001	✓ Purchasing managers’ awareness on Environmental issues ✓ Purchasing managers’ technical capabilities ✓ Cultural orientation to sustainability
Controlling	Are there any formal processes and tools to monitor sustainable purchasing? (planning and control)	Supplier evaluation Consistent definition of CSR and related measures Increase CR data integrity and availability	Pulraj, 2011; Green, Morton and New 1998; Min and Galle 2001; Vachon and Klassen 2006 Harwood and Humby, 2008; Harwood and Humby, 2008;	✓ Measurements relating to suppliers ✓ Integrated economic-sustainable measures ✓ Integrated information systems

One of the main reasons for choosing Schiele’s model resides in its summary character synthesizing the main insights of previous literature on purchasing maturity and on its twofold theoretical and empirical anchorage. We thus obtained some preliminary research questions for guiding our data collection with respect to the five dimensions identified in Schiele (2007), namely planning, organizational structure, process organization, human resources and leadership models, and controlling structures. Moreover, scrutinising extant literature on sustainable purchasing along these five dimensions, we identified a tentative list of variables to monitor during our research design and analysis. Some related insights on the expectations concerning mature sustainable purchasing have been also annotated for further developments.

Secondly, we looked for concrete correspondences of the predefined variables in the fieldwork and also observed new themes emerging from our single case analysis. Data collection involved on the one hand documentary sources of information, and on the other face-to-face interviews with multiple respondents identified across various and varied management areas within the responsible purchasing and purchasing functions in the NTC. The aim was to identify and compile, compare and contrast respondents’ perception of the evolution of the responsible purchasing over time up to the present day, whilst at the same time identifying perceived problem areas and future development issues. The data collected was

subject to content analysis, and provided the basis for an initial monograph. This latter was iteratively compared with our preliminary theoretical premises bearing our stage framework of sustainable purchasing organizational development.

Case selection

An in-depth single case study approach was adopted following Yin (2003) as the case at hand is an extreme/unique case, and on the other longitudinal in nature. The rationale for choosing the national state-owned transport company NTC was based on its *rarity and uniqueness* (Yin, 2003) since NTC represents the nationwide company which was amongst the first to focus, and in an important way, on the sustainable purchasing theme. The company offers services for passengers and freight.

NTC consists of five divisions. Three of them are responsible for different kinds of transport services (respectively urban, long distance and cargo); NTC Infra deals with infrastructure maintenance, design and construction; Connexions covers site management, land management, and land development activities.

The purchasing function in a complex and widespread organisation such as the NTC represents the second cost item after the personnel costs and deals with many and diverse typologies of items and services: from works on the infrastructure and buildings, to services for the stations and vehicles, product provisions either technical for the infrastructure or to assure the service provision (e.g. commercial software), energy supplies and intellectual services. Almost 2.000 employees are involved in the function including the collaborators inside Purchasing Management (Fig. 1) and those positioned in the divisions to offer specialised and dedicated purchasing services to each of the branches of the company and to different regional areas.

A specificity of the Purchasing function at NTC, linked to its service nature, is that an indirect and not always evident link exists between the upstream constraints defined to select the suppliers and the impacts downstream on the core elements defining the value proposition proposed to final users.

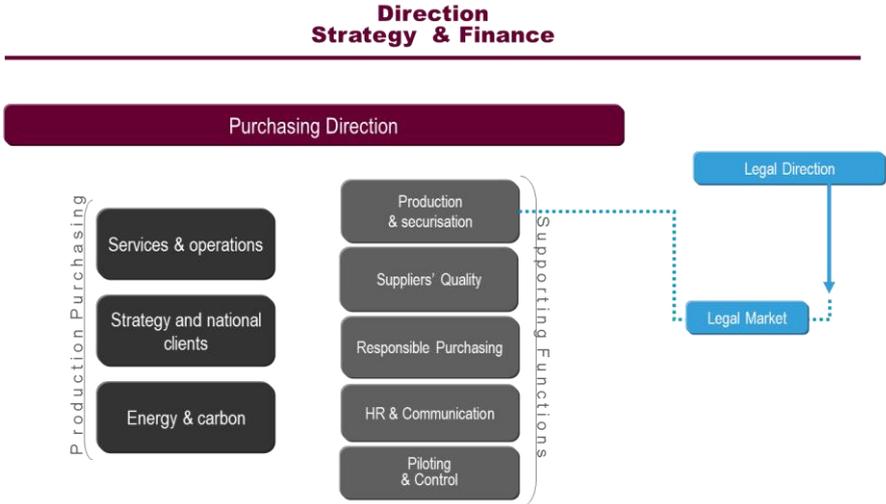


Figure 1. Purchasing Function Organisation Chart.

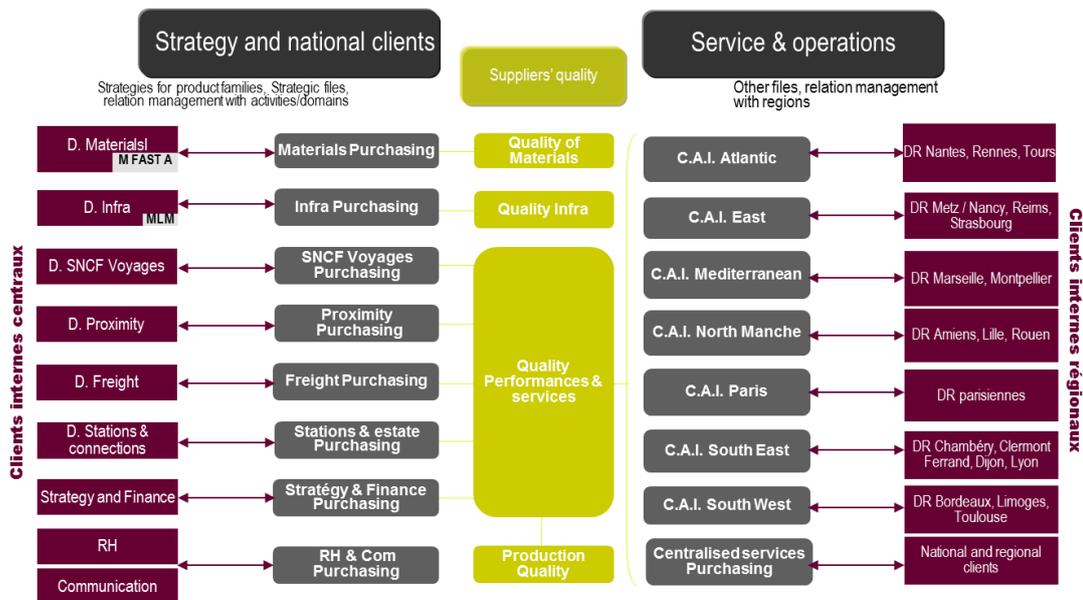


Figure 2. Purchasing function Organisation Chart: Divisional level.

Findings: Responsible purchasing in the NTC and the dynamics of organizational change

The integration of a sustainable approach to purchasing in NTC, which is the focus of the following sections, is first of all relatively recent – dating from 2008 – and, one can say, quite a fast-moving process so far.

The data collected by the interviews enables identification of 3 broad interlinked stages spanning over the period 2007 to 2012. The respondents were also questioned as to the state of affairs for Responsible Purchasing at the present time, and as regards the foreseeable future.

An overview of the processes at play

The following in-depth analysis of the sustainable purchasing function demonstrates four relatively easily identifiable successive stages or states, highlighting a progression from a “satellite” and unstructured role or function to that of a pilot function, clearly integrated within the NTC’s purchasing organization. Each of these stages can be characterised by an evolution in the environment, and especially by personal convictions of a certain number of managers and staff operating in collaboration with and especially under the responsibility of a Sustainable Purchasing manager specifically appointed for the task. Each stage demonstrates increased and progressive organisational commitment to and consolidation of the sustainable purchasing function. At each stage the collaboration between the Sustainable Purchasing team and all company counterparts involved increases, and specific sustainable purchasing planning processes management tools and performance indicators are designed and implemented. At the same time, alongside operational issues, management training is provided on the sustainable purchasing theme, with a view to facilitating organizational change. As a result, intra- and inter-functional communication can also be seen to improve as the firm progresses stage by stage.

2007 to mid-2008: an emergent unstructured process, or “muddling through”

This initial stage is characterized by numerous clearly identifiable drivers to organisational change. First of all an external environmental context lending itself to stimulation of the sustainable development effect in the company at group level emerged. Indeed, in 2007 the French Government launched the sustainable development initiative the “Grenelles de l’Environnement”, resulting in the emergence of “la loi Grenelle 1”, a first wave of legislation, impacting on firms, relating to environmental and sustainability issues. The transport industry was one of the major areas concerned by this wave of legislation, and hence naturally NTC, with the development of freight and High-Speed train activities. Strong links between corporate management and the state were certainly not foreign to driving the process either. At the same time renewed discussion on values linked to the “public service” dimension

of NTC's activity, with concern for issues such as users, proximity, and regional integration and solidarity also facilitate and favor the emergence of a sustainable development approach which progressively permeates the firm as a whole across its main functional areas. One other important factor driving this initial change towards responsible purchasing relates to the personal convictions of the Corporate Director of Purchasing regarding sustainable development, along with his declared intent to introduce a purchasing approach within the NTC going beyond the simple cost of acquisition and cost reduction dimensions, to integrate a total-cost-of-ownership and other broader issues. This corporate change and overall intent to "modernize" the whole purchasing function gave rise to 5 strategic areas¹ of focus being defined for purchasing and other functional areas of the firm, one of which being Sustainable Development. This latter is what gave birth to the Responsible Purchasing function and policy per se.

Another decisive factor in this initial stage is the official appointment of a manager "Head of Responsible Purchasing" The creation post itself was a major step, as was the profile sought of the man to fill the job. This, again, led to the choice by the Director of Purchasing, and the subsequent employment, of a candidate with a past history and strong personal convictions also as regards sustainable development. These moves laid the foundations for implementation of a responsible purchasing policy and structure, but this structure, at that point in time, was lightweight and demonstrated little visibility and impact internally, with only one other staff member being allocated full time to the role, and a second only 20% of his/her time. A formal version of a Responsible Purchasing (RP) function and department thus existed, but in a skeleton form only. Outside the RP Department per se, other efforts were made via training for the purchasing managers in the Purchasing Department. This training, via a seminar, however, was limited to a sensitizing of staff to broad sustainable development issues, and collaboration between these same purchasing managers and the Responsible Purchasing department's staff can be qualified as embryonic in nature, with little or no intra-functional cooperation. No formal planning process or piloting tools existed for Responsible Purchasing strategy and practice, and communication on the theme was to all intents and purposes inexistent.

Mid-2008 to end of 2010: a "structuring" function

At the institutional level over the period mid-2008 to end 2010 various drivers of change can be identified. Amongst these are external actors, the regional and local authorities, which specifically integrate Sustainable Development issues within the framework of an "Agenda 21" project². Inside the organization the previously mentioned personal convictions of certain actors come to bear. The recently appointed Responsible Purchasing Director sets out to implement "*a change of heart at the heart of the purchasing function*" with the help of staff associated with the newly formed DDADS (Responsible Purchasing Department)³: "*The militants rallied together to work with them*" (C. W. Head of Pole ASE (Fair and Responsible Purchasing)⁴) "*as it's a mammoth venture*". This point of view is confirmed by L.M., "*It's a veritable crusade...it takes 3 years to try things out, to clone and repeat, to convince*" (L.M., CDS⁵ (Coordinator, Sustainable Purchasing), and Head of Purchasing Department "Freight"). Responsible Purchasing's structure progressively took shape, and visibility in the organisation improved over this period with O.M. being named "DDADS" (Delegate Director of Sustainable and Responsible Purchasing), and a veritable team being created and developed. Thus various Poles of competence were formed, with Heads of Pole being appointed in each case: an "ASE" (Responsible and Sustainable Purchasing) Pole, a "Governance" Pole, a "Strategy and Methods" Pole (GSO), an SAES (Environment and Health) Pole, and finally an SME Policy (Small and Medium firms) Pole.

The 4 Heads of pole positions are completed with the naming of "CDS" in each of the Inter-regional Purchasing Centres (CAI's). These CDS – staff selected from the regular purchasing staff - were appointed on a volunteer basis, their role being to translate and facilitate, in the field, the Responsible

¹ The other 4 were: eco-quality performance, customer service, process simplification, and HRM in Purchasing.

² Agenda 21 is a global project with associated action plan with the explicit objective of progressive but permanent implementation of a sustainable development strategy by the local authorities in the Regions. (source ADEME).

³ DDADS : Direction des Achats Durables et Solidaires (Sustainable and Responsible Purchasing Director)

⁴ ASE : achats solidaires et équitables (Responsible and Fair Purchasing)

⁵ CDS : Coordinateurs Achats Durables et Solidaires (Coordinator for Sustainable and Responsible Purchasing)

Purchasing policies and strategy set by the Director of Responsible Purchasing, thus acting as interface between Purchasing (the CAI's) and responsible Purchasing (DDAD). With 20% of their time dedicated to responsible purchasing issues, in practice their role is that of watching over sustainable development activities in the area of purchasing, and encouraging Purchasing staff to keep up to date on, and to exchange with others relative to, responsible purchasing issues, activities, and best practice. In other words, they are animators for responsible purchasing in the regions. As explained by L.M., *“the ‘CDS’ facilitate internal promotion and animation, whilst at the same time fulfilling a fully operational purchasing manager’s job, and remaining part and parcel of the purchasing team”*.

A training programme, comprising a series of conferences, was organized for the CDS to bring them up to date on responsible purchasing and risk management issues.

This stage marks a “structuring” phase for DDAD operations, with a distinct organisational mission for the DDAD, and identified interfaces with the regular purchasing entities.

The efforts made in responsible purchasing were concurrent with a strategy and efforts to shift from a cost-based approach to a Total Cost of Ownership (TCO) approach by Purchasing in general, whilst from the outset identifying and elaborating internal requirements and resulting specifications, in close collaboration with internal “customers”. The yearly Purchasing Convention was also devoted to federating the Responsible Purchasing policy and message across the purchasing function at large.

Intra-functional collaboration occurs at this stage essentially – but not only - between members (Heads of Pole and CDS) of the Responsible Purchasing Department. Some collaboration germinates between the CDS and regular buyers. At the outset this happens on an opportunistic level, for example when new umbrella agreements come up for signing, or else for calls for tender. Subsequent collaboration however takes on a more systematic nature with the setting up of “Product family” files (Fiches familles) which identify and focus attention on sustainability issues per product family purchased.

The planning process and objectives setting for Responsible Purchasing thus takes on a very pragmatic form, on a real-time basis, targeting opportunities such as the dates of termination of contracts, or else based on frequency of purchases made, or else when buyers reviewed and revised the purchasing strategy for their family of products.

Various responsible purchasing management tools saw the light of day also in this initial stage, starting with the Strategic Purchasing Plan (PSA). This planning tool identified purchases planned over a 3-year horizon. A Purchasing Dashboard was also developed, targeting the monitoring of all action undertaken across the aforementioned 5 strategic purchasing areas, and linked to responsible purchasing. A Responsible Purchasing “barometer” was similarly drawn up, to quantitatively measure the degree of impact and penetration of responsible purchasing practices by purchasing managers across the company. This barometer measures the degree of penetration of sustainable purchasing relative to total purchases. Several “fiches” (cards) were also developed, including “Purchasing family” cards describing purchasing processes and explicitly integrating environmental and social RP criteria. CDS job description cards were also drawn up to clarify and formalise the role and activities of the CDS. Action cards (*fiches actions*) were also used, to qualitatively report and communicate on, by means of examples, specific RP action carried out. Although no doubt effective, however, overall these tools seem to be mainly qualitative in nature, and their actual impact and “return on investment” is difficult to assess, as are the actual advantages (economic, image, management of risks...) resulting from “buying responsibly”. Internal communication at upper management level, regarding RP activities at large, by the “DDADS”, is carried out by and under the guidance of OM, Director of RP. This internal communication is not always well received, however, and meets with resistance and a certain overload. To use the RP Director’s own words *“I didn’t have the in-house culture..., there is no point in trying to go too far too fast. It’s a networking approach that is needed. You have to practice maieutics”*.

2011 onwards: shift from an emergent structure to a strategic, support, structure

From 2011 onwards several factors driving change can be identified. Firstly, the external environment and specifically an increased demand for “sustainable mobility” in the transport industry (people and goods) coupled with increase in social, societal and environmental requirements demanded of NTC’s business partners. Governmental restrictions regarding CO₂ gas emissions, along with increased energy costs, also set the scene. This period coincides with the implementation of the first “bilan RSE” (CSR

assessment) by NTC⁶ which comprises four critical components: offer sustainable mobility for passengers and goods (in particular as regards the cost dimension), reduce environmental impact, consolidate and enhance the social responsibility policy (diversity and improved working conditions), and encourage local development in the regions. This CSR assessment puts a strong emphasis on the relationships with stakeholders, and results in a 3-year plan with specific objectives for Purchasing at NTC: map out the CSR risks of 500 suppliers.

Finally sustainable development infiltrates increasingly the different strata of the firm, and in-house customers, and in particular the Managers of units (Directeurs d'établissement) are motivated by, and mobilised around, the sustainability issue. Sustainable development managers are recruited in all management teams in the firm. The concern for responsible purchasing, especially, is disseminated henceforth at all levels in the purchasing organisation.

Visibility in the organisation is reinforced by the naming of the Head of DDAD as expert amidst a network of technical and scientific experts in NTC.

The “DDADS” progresses little by little towards a “guiding” and support function, with monitoring of other actors involved in the purchasing process, even if the critical role and means employed remain that of “sensitizing” people to the issue. “Our work consists of making buyers aware, of advising them, be it “CDS” lead family buyers, or Regional Buying Centres (CAI⁷). We stimulate them and help them diversify their purchasing portfolio (from a responsible purchasing perspective).” (M.T.,⁸ Head of Sustainable and Fair trade department).

In this stage, the head of Human Resources for the Purchasing function implements a personal mobilisation process which translates as, specifically, a training program for 200 purchasing managers. The collaboration between heads of department and buyers is reinforced via the implementation of a process which begins with an initial survey and continues by the definition of a strategy per purchasing family, involving participation of the “CAI’s” and in-house customers. The “DDADS” is not however limited to an advisory role involving just the three first stages of the purchasing process (cf. Fig. 3).

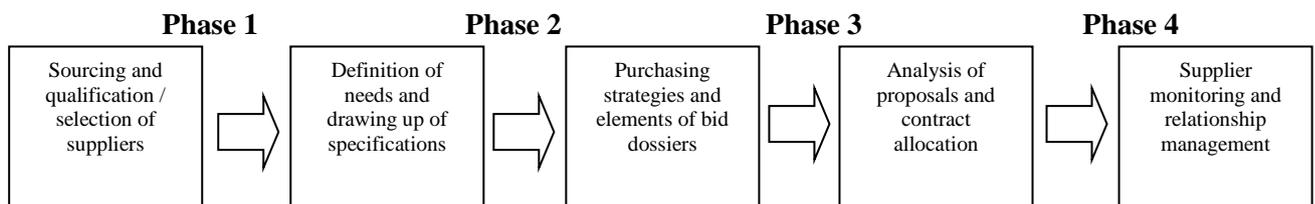


Figure 3. A schema representing the fundamental stages in the purchasing process at NTC.

Finally, an informal collaboration with the Corporate Sustainable Development department takes shape via the drawing up of a CSR (Corporate social responsibility) report.

Whilst planning for responsible purchasing still remains subordinate to the objectives of the CSR and Purchasing departments it nonetheless becomes genuinely strategic. It folds out across the six following dimensions:

- reduce greenhouse gas emissions
- master social and health impact
- take on broader responsibilities
- contribute to the creation of societal value
- implement the transformation towards responsible purchasing

The planning process also integrates a 3-year horizon objective of management of supplier risks CSR relating to CSR, starting with a risk-mapping process.

The Responsible Purchasing (RP) steering tools and methods are designed or optimized. This includes Sustainable Development reference lists used as the foundations for purchasing strategy, banks of sustainable development criteria for each purchasing family strategy, along with “Action documents” identifying those purchasing dossiers harboring key sustainable development elements. The design and

⁶ Source : 1^{er} bilan RSE 2010

⁷ CAI : Centrale d'Achats Interrégionale

⁸ Sustainable and Fair Trade Department

implementation of these tools nonetheless encounters difficulties such as the resistance to change by suppliers relating to selection criteria, or simply the absence of motivation by buyers.

“In fact, the success of the approach depends very much on the attitude and sensitivity of the buyers.” (E.W., GSO⁹ Pole).

At the same time the DDADS’ communication benefits from the Intranet allowing staff to be informed as to the responsible purchasing strategy, tools and methods implemented, and results obtained

The future: responsible purchasing, an integrated pilot function

Drivers of change: external factors include the government and local authorities who increasingly exert pressure for ever-increasing responsible mobility. Other stakeholders: users, staff, trade unions, customer companies and associations are increasingly vigilant regarding NTC’s commitment to sustainability. Various comments by the respondents anticipate on future evolution and possible constraints and barriers:

Internally top management continues to promote a sustainability policy which becomes transverse to all branches and functional areas of the company:

“We are operating a change in logic: from a transport company, we are becoming a sustainable mobility company [...] We have taken on all stakes related to sustainable development, and have placed them the heart of our strategy. [...] we see there the key to our future development and our competitiveness in the years to come.” (G.P., President NTC).

In-house customers promote and demand the sustainable development issue. Responsible purchasing practices are deployed in the purchasing function and the majority of actors are convinced of the interest the approach represents.

The internal visibility of the responsible purchasing organisation will be assured, relative to all branches and functions of the firm, and the DDADS’ has spread the process to other functions. The DDADS has also employed new staff.

The DADDS function defines the future strategic development orientation as one directly integrated into the purchasing function’s strategy. *“We won’t talk of a Responsible Purchasing function, but rather one of Value creation.”* (O.M., Head of DADDS). Thus sustainable development and other value dimensions will be simultaneously present and managed.

Training in Sustainable development will be deployed at all hierarchical levels in the firm. HRM will have integrated criteria linked with the evaluation criteria of all purchasing managers.

The collaboration between the Poles, the CDS and all buyers and in-house customers will have been consolidated. The DDADS will be involved down the whole chain of the buying process (see diagram above). Suppliers, external to the company, will demonstrate regular collaboration with the RP function. The DDADS will work regularly with Corporate Sustainable Development and all Sustainable Development managers so as to exchange best practices and optimise on the group’s CRS strategy.

The Planning process for Sustainable Development objectives will be extensively integrated into the general purchasing policy planning process. The branches and different activities will have defined a strategic Sustainable development plan with, as regards purchasing, the support of the DDADS in preparing and deploying the plan. The tools to pilot the process will be collaborative in nature, and constantly enriched and improved by all actors involved in the purchasing process.

Communication will be increasingly participative with all purchasing agents acting as witness. It will be both rigorous and emotion-based. RP will be a major component of the Yearly CSR report. For major events (NTC Purchasing Seminars and Conventions) RP will be presented as a high-performance approach for a transformation towards global performance, at the heart of NTC’s business.

⁹ GSO Pole: Governance, Strategy and Tools Department.

Organizing variables	Research questions for analysis	Stage 1 Unstructured	Stage 2 Structuring	Stage 3 Supportive	Stage 4 Integrated
Procurement planning	To what degree is purchasing involved in analyzing & integrating: - the internal demand/ requirements for sustainable inputs - the supply market in terms of sustainable offer (innovations, dynamics)	Little to no planning The sustainable purchasing function simply reacts to internal demand & requirements.	Sustainable purchasing can anticipate internal demand in terms of sustainable purchases (per category) and is aware of the existing offers on the supply market. It is not however formally integrated in the planning process (receives information) Priority is given to purchasing activities less change-adverse and technically easier to apply	Sustainable purchasing is formally integrated in the planning process as a support function. Its contribution to planning relies on its clear vision of the technological evolutions affecting the supply market.	Sustainable purchasing has a leading role in the planning process in particular concerning the innovation process with selected suppliers (market making role).
Organisational structure	Is a sustainable purchasing organization established (dedicated purchasers, or units)? Are roles & responsibilities defined? Is sustainable procurement supported at top management level?	No specific organization established for sustainable purchasing. No formal support from top management (no strategic integration). Lack of internal visibility on sustainable purchasing.	Sustainable purchasing is a dedicated and centralized function with internal visibility: -Cross functional interfaces with clear roles and responsibilities defined -purchasing director is permanent member of the board committee.	Sustainable purchasing is an active part of the group-wide procurement network. It has mandates to make project-or unit-specific purchases. Purchasing director is a permanent member of the executive committees of business units.	Sustainable purchasing is fully integrated in the group-wide procurement network. Sustainable purchasing drives continuous improvements in terms of sustainability. Regulations & sanctions in case of non-compliance to sustainability criteria are put in place.
Supplier relationships	How is sustainable purchasing integrated in supplier relationship management in particular concerning: supplier sourcing, selection, evaluation, development & early involvement.	No explicit sustainable purchasing strategy in relationship management is in place.	Development of tools and staff roles to facilitate integration of sustainable criteria in supplier sourcing and selection.	Market maturity and risks studies are regularly conducted, master agreements are planned in advance when possible and suppliers are evaluated over 7 different aspects.	Continuous cooperation with suppliers, actions for developing suppliers and establishing partnership-like relations

Human resources	In what respect is sustainable purchasing integrated into the HR policy concerning recruitment, job descriptions, performance appraisal; competence development etc...	Operational & administrative buyers with little professional /specific education	Training programs to selected buyers on responsible purchasing and risk management New types of buyers are defined with sensitizing role or wider responsibility over entire product categories Internal communication on the subject goes through trails and errors	Tools and information are now available to buyers but effective adoption of tools and usage of information is still highly dependent on the individual. Middle management performances' measures do not include sustainability criteria	Training addresses different hierarchical levels inside the company. CSR criteria are established to evaluate also middle managers inside the purchasing function. Technical and sustainability oriented purchasers
Controlling system (Info system)	Are there any formal processes and tools to monitor sustainable purchasing? (planning and control)	Very little knowledge of purchasing spend Administrative – orientation of IS	Descriptive monitoring systems are set up to measure the advancement of sustainable purchasing and report best practices	Piloting tools to plan future actions are added to pre-existing descriptive monitoring systems	Monitoring information system linked not only to measures of sustainable purchasing performances but also to contribution to the corporate strategy

Figure 2. Summary: The four identified stages/states of the sustainable purchasing function at NTC

Conclusions

Key findings and managerial implications

Although recognising and confirming the influence that external factors exert in driving the change toward sustainable purchasing, this study places particular focus on the role of internal factors influencing organizational aspects. Consistent with previous studies (Harwood and Humby, 2008; Giunipero et al., 2012) findings demonstrated that management conviction, measurement systems, and diffusion of CSR culture are all relevant to development leading to a mature sustainable purchasing function. Successful adoption of a bottom-up diffusion of sustainable purchasing practices also requires that middle management feel concerned and responsible, and indeed that their own performance be evaluated on criteria related to sustainability. A lack of middle management commitment and involvement puts into question the effectiveness of sustainable purchasing policy (c.f. the CDS in the case not having the support of their managers).

Analysis of the data from the sample firm reveals three broad stages so far – and the fact that the process is not complete - in the responsible purchasing process seen from an organisational perspective, each demonstrating specific dynamics. In line with other previous studies on sustainable purchasing, albeit studies not focusing specifically on the topic of organisation, our study confirms that *generic purchasing maturity* is a crucial pre-requisite for developing mature *sustainable* purchasing. For instance, The technical (from a purchasing techniques point of view) competencies of purchasing managers is fundamental for their comprehension of subsequent relevant sustainability issues.

Also, a diffused strategic attitude in organising purchasing, englobing a spread of issues going from analysis of the supplier market to supplier selection and evaluation is important. In confirmation of this, because purchasing maturity is not equally distributed inside the company, but depends on the type of purchasing and on the role of the buyer, from an organisational viewpoint, sustainable purchasing encounters obstacles to its development when the purchasing function in itself is not mature enough.

A second point which supports previous contributions is that the *maturity of the RSE* and the presence of diffused a CSR orientation (Fel, 2011, Pulraj, 2011) is also important. In our case the lack of strong and integrated communication with the CSR department is denounced by interviewees. Also the potential contribution of the integration of CSR criteria by the marketing and quality departments is evoked.

After all the main contribution emerging from our study is that *inter-departmental integration* is a third fundamental factor to implement sustainable purchasing and favouring its maturation. Many elements in our analysis lead to this reflection. First, integration can help efficiency, avoiding “duplication” of tasks and overload problems for the central sustainable purchasing direction. Second, integration can further sustain the spread of sustainability culture inside the firm since actors have wider views on the company’s activities and a deeper understanding of their role in the chain with higher awareness of their behaviours’ consequences. For instance, in the case examined some buyers do not have any idea about the final user and, vice versa, marketing department is not aware of the complexity of the sustainable purchasing effort. In some cases horizontal integration would be beneficial, for instance between purchasing, quality and CSR departments in order to define clear characteristics for a bid; in other cases vertical integration along the hierarchy can be beneficial as exemplified by those family buyers who do not even have contact with suppliers and are thus not able to effectively support and motivate buyers under their responsibility. Another aspect is that higher integration would also facilitate communication and visibility of the responsible purchasing function, favouring the appreciation of its activities and results. Finally, innovation processes would also be developed through higher integration: an example is provided by the circular sales-purchasing activities realised in some branches. Especially the integration between Marketing, CSR and Purchasing interfaces would bring focus on different priorities and solutions.

This contribution is consistent with the debate developed in the special issue on “Integrating marketing and operations for business sustainability” recently published in *Industrial Marketing Management* (2014, Volume 43, Issue 1, Pages 1-176), according to which in order to become more involved with the issues of sustainability, marketing activities should strongly integrate with operations. In this vein, if the supply and demand chains are integrated the CSR will take care over the entire value chain including also purchasing. The logical “end of the story” would be the integration of sustainable purchasing direction in the corporate sustainability department.

Limitations and future research potential

The work presented here on the dynamics of sustainable purchasing is a preliminary analysis of the context of NTC. It will be completed with more in-depth analysis and compared with the models from the literature presented earlier which present certain elements in common. The process is clearly not yet complete, full integration into purchasing strategy is not yet achieved, and questions can be asked as to how this may be accomplished, with the different perspectives of the respondents taken into account to assess where improvement may lie. Clear also is the fact that the success to date is driven in part at least by specific people holding specific positions as regards sustainability and its importance to society. What would the result be in the case of departure of some or all of these actors? Also, methodological focus here is on the Purchasing and, especially, the Responsible Purchasing, functions. A broader organizational perspective with the points of view of other actors from other functions interfacing with purchasing would provide extra insight both to dynamics, possible problem areas and potential solutions. Also, at present operations for RP are based on a selective process, accompanying specific buyers on selected transactions so as to provide “best cases” or success stories as examples for others to follow. “Scaling up” to cover all NTC purchases using this strategy is problematic in that the Responsible Purchasing team will rapidly encounter a situation of insufficient resources. In fact, to complicate matters further, the Responsible Purchasing team suffer from their own success. They have striven to develop an identity and make progress on the responsible purchasing front. Having done so, they are seen as being a separate, distinct entity from the Purchasing Department. This is not an advantage if the target is ultimately to “blend into the mass” and diffuse responsible purchasing practices across the firm. This represents another organizational hurdle for the future.

Also, from a methodological perspective, and more generally, the findings presented are of the exemplary kind, concerning only one case, although extreme and unique. Corroboration of the findings here with data from other companies would consolidate or question some of these findings. The case chosen is unique and demonstrates specifics. Firstly it concerns a public company, with specific rules as to how to engage with suppliers. It is, at the same time, a service company. Finally, it is clear that in the case of NTC inter-departmental integration between supply and demand is not optimised with problems of non-consolidation of purchasing and friction between functions. Indeed, overall, a broader comparative view involving multiple firms with varying profiles would be of interest to better understand the dynamics of organisational change.

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